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Task Order No.: UIC-7B UIC/TRL Study No.: 104

Draft Report for Task Order No. UIC-7B

ACUTE ORAL AND INTRAPERITONEAL TOXICITY STUDY OF WR242511 AND WR269410 IN RATS

Sponsor: U.S. Army Medical Materiel

Development Activity

Contract No.: DAMD17-92-C-2001

Task Order No.: UIC-7B

Test Articles: WR242511 Tartrate

WR269410

Study Director

Barry S. Levine, D.Sc., D.A.B.T.

In-Life Phase Completed On

July 14, 1993

Performing Laboratory

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Contract No.: DAMD17-92-C-2001

Task Order No.: UIC-7B UIC/TRL Study No.: 104

STATEMENT OF COMPLIANCE

To the best of my knowledge, (Study No. 104 - ACUTE ORAL AND INTRAPERITONEAL TOXICITY STUDY OF WR242511 AND WR269410 IN RATS) was conducted in compliance with the Good Laboratory Practices regulations as published in 21 CFR 58, 40 CFR 160 and 40 CFR 792 in all material aspects with the following reservations:

The stability of the test or control articles under the test conditions has not been determined by the testing facility (Sections 105 and 185). This requirement is not applicable since only a single dose was administered in this study. Test article stability will be reported following completion of the repeat dose toxicity studies.

The protocol for this study was approved by the UIC Animal Care Committee.	
Signature	
Study Director	
Barry S. Levine, D.Sc., D.A.B.T. Date	

QUALITY ASSURANCE STATEMENT

STUDY TITLE: ACUTE ORAL AND INTRAPERITONEAL TOXICITY STUDY OF WR242511 AND WR264910 IN RATS

STUDY NUMBER: 104

STUDY DIRECTOR: BARRY S. LEVINE

INITIATION DATE: 12/3/92

This study has been divided into a series of phases. Using a random sampling approach, Quality Assurance monitors each of these phases over a series of studies. Procedures, equipment, documentation, etc., are examined in order to assure that the study is performed in accordance with the Good Laboratory Practice regulations of the Food and Drug Administration and the Environmental Protection Agency to assure that the study is conducted according to the protocol.

The following are the inspection dates, phases inspected, and report dates of QA inspections of the study.

INSPECT ON 12/7/92, TO STUDY DIR 12/7/92, TO MGMT 12/7/92 PHASES: PROTOCOL REVIEW

INSPECT ON 5/13/93, TO STUDY DIR 5/13/93, TO MGMT 5/13/93 PHASES: ROOM ENVIRONMENT, QUARANTINE AND LICK-IT CHECK

INSPECT ON 5/27/93, TO STUDY DIR 5/27/93, TO MGMT 5/28/93

PHASES: BODY WEIGHT, DOSING AND CLINICAL SIGNS

INSPECT ON 7/20/93, TO STUDY DIR 7/22/93, TO MGMT 7/23/93 PHASES: ANALYTICAL LABORATORY RAW DATA AND REPORT AUDIT

INSPECT ON 9/2-3/93, TO STUDY DIR 9/10/93, TO MGMT 9/14/93

PHASES: RAW DATA

INSPECT ON 9/8-10/93, TO STUDY DIR 9/10/93, TO MGMT 9/14/93

PHASES: DRAFT FINAL REPORT

QUALITY ASSURANCE

9/13/93

DATE

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ACUTE ORAL AND INTRAPERITONEAL TOXICITY STUDY OF WR242511 AND WR269410 IN RATS

TRL Chemical Nos.: 1620614 & 1720614

Sponsor: U.S. Army Medical Materiel

Development Activity Frederick, MD 21702-5009

Test Articles: WR242511 Tartrate

WR269410

Sponsor

Representative: George J. Schieferstein, Ph.D.

Testing Facility: Toxicology Research Laboratory (TRL)

University of Illinois at Chicago (UIC)

Department of Pharmacology

1940 W. Taylor St.

Chicago, Illinois 60612-7353

Barry S. Levine, D.Sc., D.A.B.T. Date

Dosing Initiation: May 27, 1993

In-Life Completion: July 14, 1993

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SUMMARY

This study examined the acute oral and intraperitoneal toxicity of WR242511 tartrate and WR269410 in rats. The dose levels were selected on the basis of range-finding tests. After dosing, the animals were weighed weekly, observed daily for 14 days, and the survivors were necropsied on Day 14. Nonsurvivors were also necropsied.

As shown in Table 1, the acute oral LD50 of WR242511 tartrate in male rats, administered in 1% Methylcellulose/0.4% Tween 80 by gavage, was approximately eight-fold lower than in female rats (males; 16.3 mg base/kg and females; 135 mg base/kg). The LD50 values obtained when WR242511 tartrate was administered intraperitoneally in the same vehicle were not significantly different between the sexes (males; 23 mg base/kg and females; 30 mg base/kg). Thus, the LD50 of WR242511 tartrate was unaffected by sex when administered by intraperitoneal injection, but affected by sex when administered orally.

The acute oral LD50 of WR269410 in male rats, administered in 1% Methylcellulose/0.4% Tween 80 by gavage, was approximately three-fold greater than in female rats (males; 420 mg/kg and females; 147 mg/kg). Due to a physical inability to intraperitoneally administer WR269410 dosage formulations in 0.1% Methylcellulose/0.4% Tween 80 at high enough concentrations to produce lethality, WR269410 was administered intraperitoneally as a solution in polyethylene glycol 200 (PEG 200). The calculated LD50 value of intraperitoneally administered WR269410 in males was 155 mg/kg (Table 1). An LD50 value in females was estimated to be approximately 70 - 80 mg/kg.

The results of this study suggest that WR242511 tartrate is more acutely toxic than WR269410 when administered either orally or intraperitoneally. Based on the oral LD50 data and after consultation with the Sponsor, the following dose levels are suggested to be used in the two week oral dose range-finding studies in rats of WR242511 tartrate; 0, 0.5, 2.0, and 6.2 mg base/kg/day, and of WR269410; 0, 2.0, 6.0, 18.0 mg/kg/day.

2. INTRODUCTION

The purpose of this study was to assess the toxicity of the WR242511 tartrate and WR269410 in CD® rats following a single oral or intraperitoneal dose. The results of this study will be used to select dose levels for a two week oral dose range-finding study in rats for both test articles. The experimental design was based on the Sponsor's requirements. The protocol for this study was approved by the UIC Animal Care Committee. The rat is a standard and accepted species for toxicology studies, and was specified by the Sponsor. The routes were also specified by the Sponsor. No unforeseen circumstances affected the integrity of the study. Dosing was initiated on May 27, 1993 and the in-life portion was terminated on July 14, 1993.

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MATERIALS AND METHODS

3.1 Test Articles

One test article (WR242511 Tartrate, Bottle No. BM05816, Lot No. DJD-08-235), a yellow, crystalline powder, was received on December 15, 1992 from Herner & Co. and was assigned an in-house chemical number (1720614). It was stored in the original container at -20 to -15°C and at the ambient relative humidity of the freezer protected from light. The Analytical Chemistry Report is contained in Appendix 1. The test article was initially identified by GC-MS and the purity was determined by HPLC (99.51 ± 0.02%).

The second test article (WR269410, Bottle No. BM11565, Lot No. 866.B.91.1), an off-white powder, was received on December 15, 1992 from Herner & Co. and was assigned an in-house chemical number (1620614). It was stored in the original container at -20 to -15°C and at the ambient relative humidity of the freezer protected from light. The Analytical Chemistry Report is contained in Appendix 1. The test article was initially identified by GC-MS and the purity was determined by HPLC (100 %). For intraperitoneal studies, a formulation of the test article [WR269410 in Polyethylene Glycol 200 (PEG 200); concentration 100 mg/ml] was received on April 27, 1993 from Dr. Douglas R. Flanagan, University of Iowa, College of Pharmacy. It was stored in the original container at 0 - 4°C and at the ambient relative humidity of the refrigerator. WR269410 in PEG 200 was administered by the intraperitoneal route only. The concentration of two separate batches of the received test article in PEG 200 was determined to be 99.95 and 99.5 mg/ml by Dr. Flanagan, and is documented in Appendix 2.

3.2 Dosage Formulations

WR242511 tartrate was administered as a suspension using 1% Methylcellulose/0.4% Tween 80 as the vehicle. The dose levels and formulation concentrations of WR242511 tartrate in this report refer to quantities of base, not tartrate salt. WR269410 was orally administered as a suspension using 1% Methylcellulose/0.4% Tween 80 as the vehicle. Initially, in the range-finding test, WR269410 was administered intraperitoneally in 1% methylcellulose/0.4% Tween 80, but because suspensions of WR269410 necessary to produce mortality could not be passed through needles to dose the rats, following discussions with the Sponsor, the drug was administered as a solution in PEG 200 intraperitoneally. Stock solutions of WR269410 (concentration 100 mg/ml) were received from Dr. Douglas R. Flanagan as described above. Samples of all WR242511 tartrate and WR269410 dosage formulations in 1% Methylcellulose/0.4% Tween 80 were analyzed for test article concentration prior to their use. Samples of WR269410 dosage formulations in PEG 200 were sent to Dr. Flanagan for analysis, but the analysis report of test article concentration shown in Appendix 2 was received subsequent to test

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article use. Therefore, because report analysis was not released prior to dosing, a few dosage formulations of WR269410 were used in the acute toxicity study by intraperitoneal administration that were not within 10% of their intended concentrations. The results of these analyses are summarized in Table 2. For subsequent LD50 calculations, the actual dose levels administered based on the assayed concentration of WR269410 were used.

3.3 Test System

Virus Antibody Free male and female CD® rats, approximately 6 weeks of age (Date of Birth: March 31, 1993), were obtained from Charles River Breeding Laboratories, Kingston, New York on May 12, 1993. A second set of Virus Antibody Free male and female CD® rats, approximately 6 weeks of age (Date of Birth: May 6, 1993), were also obtained from Charles River Breeding Laboratories, Kingston, New York on June 16, 1993. Upon arrival, the animals were sexed and examined to determine their health, and were assigned a study-unique quarantine/pretest number. They were individually housed in polycarbonate cages, with Anderson Bed-o-cob® bedding (Heinold Co., Kankakee, IL), which conformed to the upper weight range recommended in the Guide for the Care and Use of Laboratory Animals, DHHS (NIH) No. 86.23. Animal room temperature and relative humidity were generally maintained at 65 - 78 °F and 30 - 70%, respectively. The room was on a 14 hour light/10 hour dark cycle. The animals were transferred to clean cages once weekly.

The rats were provided ad libitum access to drinking water via an automatic watering system in which the room distribution lines were flushed daily, and to Purina Certified Rodent Chow No. 5002 (Ralston Purina Company, St. Louis MO) except for a 16 - 20 hour fast prior to oral dosing and until ≈ 2 hours after dosing. The water was untreated with additional chlorine or HCl. The animals were quarantined for approximately one week prior to test article administration, except for the range-finding test which was conducted during the quarantine period. They were examined by the Clinical Veterinarian near the end of the quarantine period, and were released for placement on test at that time.

3.4 Experimental Design

The study was conducted in phases. The particular phases of the study are designated in the summary and the individual data as follows: (1) the study number, "104" in the first three digits; (2) the route, either "PO" (oral) or "IP" (intraperitoneal) in the next two digits; and (3) the test article, either "24" or "4" (WR242511 tartrate) or "26" or "6" (WR269410) in the last two or one digit(s). When additional dose levels were added to the study due to excessive mortality or a steep dose-mortality curve, the test article was designated by a single digit ("4" or "6") and the additional sets of animals are designated in the final digit as either "A" if one additional set of animals were used or

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as "A" and "B" if two additional sets of animals were used. These designations of using one letter to designate the test article and one letter to designate additional animal groups was used for WR242511 tartrate administered by gavage, WR242511 tartrate administered intraperitoneally, and WR269410 administered by gavage.

In range-finding tests, the selected animals were identified by their pretest number. A cage card appeared on the front of each cage and contained the following information: study number, animal number, test article identification, treatment group number and dose level. Oral dosing (gavage) was accomplished by the use of a rigid oral feeding needle in overnight fasted animals. In intraperitoneal tests, dosing was accomplished by the use of a 16 gauge x 1 inch needle. Body weights were obtained on Day 0 for dosing calculations. The animals were observed for clinical signs and mortality for at least 5 days. Survivors were euthanized and discarded. No post-mortem observations were conducted on these animals.

In the acute toxicity tests, at the end of the quarantine/pretest period, 5 animals/sex/group were chosen for the study using a computer generated-randomization program. The selected animals were uniquely identified by an ear tag. A cage card appeared on the front of each cage and contained the following information: study number, animal number, test article identification, treatment group number and dose level.

The test animals were given either a single oral dose or a single intraperitoneal dose of the appropriate concentration of the test article. Following an overnight fast (≈ 16 - 20 hours), oral dosing was accomplished by the use of a rigid oral feeding needle. The intraperitoneal dosing was accomplished by the use of a 16 gauge x 1 inch needle.

All animals were observed at least three times on Day 0 following test article administration (designated in the data as either "1, 2, or 3", or as "#1, #2 or #3" following the clinical sign of toxicity seen) and daily thereafter. Body weights were obtained in Week -1, and on Days 0, 7 and 14. All test animals which died were grossly necropsied as soon as possible. At fourteen days post-treatment (Day 14), all surviving animals were sacrificed by carbon dioxide and a gross necropsy was performed. The necropsy procedure was a thorough and systematic examination and dissection of the animal viscera and carcass. A veterinary pathologist was available to verify gross lesions. All tissues and organs were discarded following termination of the gross necropsy procedure.

The incidence of all pharmacologic and/or toxicological effects were calculated for each dose levels by sex. For body weights and body weight gains, means and standard deviations were calculated for each dose level by sex and time point. For the toxicity tests, probit analysis of dose-mortality data was used to calculate the LD50 and its 95% confidence interval (Litchfield and Wilcoxon, 1949).



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WR242511 Tartrate 3.4A

3.4A.1 Range-Finding Test

3.4A.1.1 Gavage

Dose levels listed below were tested in the range-finding test.

Dose Level (mg base/kg)	Dosage Formulation (mg/ml)	Dosing Volume (ml/kg)	No. of <u>Males</u>	No. of Females
5	1	5	2	2
10	2	5	2	2
15	3	5	2	2
25	5	5	2	2
30	6	5	2	2
35	7	5	2	2
50	10	5	2	2
60	12	5	2	2
250	50	5	0	2
375	75	5	2	2

3.4A.1.2 Intraperitoneal

Dose levels listed below were tested in the range-finding test.

Dose Level (mg base/kg)	Dosage Formulation (mg/ml)	Dosing Volume (ml/kg)	No. of Males	No. of Females
25	25	1	2	2
125	125	1	2	2
250	250	1	0	2
500	500	1	2	2

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3.4A.2 Acute Toxicity Test

3.4A.2.1 Gavage

Based on the range-finding test, the following doses were administered.

Treatment Group	Dose Level (mg base/kg)	Dosage Formulation (mg/ml)	Dosing Volume (ml/kg)	No. of Males	No. of Females
1	10	2	5	5	0
2	15	3	5	5	0
3	20	4	5	5	5
4	25	5	5	5	0
5	35	7	5	5	0
6	50	10	5	5	5
7	110	22	5	0	5
8	250	50	5	0	5
9	600	120	5	0	5

The following set of animals (designated as 104PO4A) was subsequently added due to a steep dose-mortality curve.

Treatment <u>Group</u>	Dose Level (mg base/kg)	Dosage Formulation (mg/ml)	Dosing Volume (ml/kg)	No. of Males	No. of Females
1	16.5	3.3	5	5	0
2	18.0	3.6	5	5	0

3.4A.2.2 Intraperitoneal

Based on the range-finding test, the following were administered.

Treatment Group	Dose Level (mg base/kg)	Dosage Formulation (mg/ml)	Dosing Volume (ml/kg)	No. of Males	No. of Females
1	20	4	5	5	5
2	50	10	5	5	5
3	110	22	5	5	5
4	250	50	5	5	5
5	600	120	5	5	5



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The following set of animals (designated as 104IP4A) was subsequently added due to a higher incidence of mortality of WR242511 than expected.

Treatment Group	Dose Level (mg base/kg)	Dosage Formulation (mg/ml)	Dosing Volume (ml/kg)	No. of Males	No. of Females
1	5	1.0	5	5	5
2	10	2.0	5	5	5
3	16.5	3.3	5	5	5
4	30	6.0	5	5	5

3.4B WR269410

3.4B.1 Range-Finding Test

3.4B.1.1 Gavage

The following dose levels were tested in the range-finding test.

Dose Level (mg/kg)	Dosage Formulation (mg/ml)	Dosing Volume (ml/kg)	No. of Males	No. of Females
800	80	10	2	2
1000	100	10	2	2
1200	120	10	2	2
1600	160	10	2	2

3.4B.1.2 Intraperitoneal

The following dose levels were tested in the range-finding test.

Dose Level (mg/kg)	Dosage *Formulation (mg/ml)	Dosing Volume (ml/kg)	No. of Males	No. of Females
200	40	5	2	2
400	80	5	2	2
800	80	10	2	2
1600	160	10	-	-

^{*}WR269410 in 0.1% Methylcellulose/0.4% Tween 80

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Dose Level (mg/kg)	Dosage *Formulation (mg/ml)	Dosing Volume (ml/kg)	No. of Males	No. of Females
0	0	5	0	1
0	0	10	1	0
50	10	5	2	2
150	30	5	2	2
250	50	5	2	2
375	37.5	10	2	2
500	50	10	2	2
500	100	5	2	2
1000	100	10	2	2

^{*}WR269410 in Polyethylene Glycol 200

3.4B.2 Acute Toxicity Test

3.4B.2.1 Gavage

Based on the range-finding test, the following doses were administered. WR269410 was administered in two equal dosing volumes of 10 ml/kg approximately two hours apart. Water was withheld from animals in between the time of dosings.

Treatment <u>Group</u>	Dose Level (mg/kg)	Dosage Formulation (mg/ml)	Dosing Volume (ml/kg)	No. of Males	No. of Females
1	550	27.5	20	5	5
2	700	35.0	20	5	5
3	900	45.0	20	5	5
4	1150	57.5	20	5	5
5	1500	75.0	20	5	5

The following second set of animals (designated as 104PO6A) was subsequently added due to a high incidence of mortality of WR269410 than expected.

Treatment Group	Dose Level (mg/kg)	Dosage Formulation (mg/ml)	Dosing Volume (ml/kg)	No. of Males	No. of Females
1	150	7.5	20	0	5
2	230	11.5	20	5	5
3	350	17.5	20	5	5

The following third set of animals (designated as 104PO6B) was subsequently added when a higher incidence of mortality of WR269410 than expected was observed again.

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Treatment <u>Group</u>	Dose Level (mg/kg)	Dosage Formulation (mg/ml)	Dosing Volume (ml/kg)	No. of Males	No. of Females
1	40	2.0	20	5	5
2	80	4.0	20	5	5
3	150	7.5	20	5	0

3.4B.2.2 Intraperitoneal

Based on the range-finding test, the following doses were administered.

Treatment <u>Group</u>	Dose Level (mg/kg)	Dosage Formulation (mg/ml)	Dosing Volume (ml/kg)	No. of Males	No. of Females
1	30	6	5	5	5
2	60	12	5	5	5
3	125	25	5	5	5
4	250	50	5	5	5
5	500	100	5	5	5

4. RESULTS

- 4.1 Range-Finding Test
- 4.1A WR242511 Tartrate
 - 4.1A.1 Gavage

4.1A.1.1 Clinical signs

- 5 mg base/kg: rough coat, hunched posture, decreased activity
- 10 mg base/kg: rough coat, hunched posture, decreased activity
- 15 mg base/kg: rough coat, hunched posture, decreased activity, found dead
- 25 mg base/kg: rough coat, found dead
- 30 mg base/kg: rough coat, hunched posture, decreased activity, found dead
- 35 mg base/kg: rough coat, hunched posture
- 50 mg base/kg: rough coat, hunched posture, decreased activity, found dead
- 60 mg base/kg: rough coat, hunched posture, decreased activity, found dead
- 250 mg base/kg: rough coat, found dead (♀ only dosed)
- 375 mg base/kg: rough coat, hunched posture, diarrhea, decreased activity, tremors, found dead

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4.1A.1.2 Mortality

	Mortality"	
Dose Level (mg base/kg)	Males	<u>Females</u>
5	0/2	0/2
10	0/2	0/2
15	2/2	0/2
25	1/2	1/2
30	1/2	0/2
35	0/2	0/2
50	2/2	0/2
60	2/2	1/2
250	-	2/2
375	2/2	1/2

^{*}number of deaths/number of animals in group.

4.1A.2 Intraperitoneal

4.1A.2.1 Clinical Signs

25 mg base/kg: rough coat

125 mg base/kg: rough coat, hunched posture, decreased activity, found dead 250 mg base/kg: rough coat, hunched posture, decreased activity, ataxia, found

dead (♀ only dosed) 500 mg base/kg: rough coat, hunched posture, decreased activity, found dead

4.1A.2.2 Mortality

	Mortality ^a	
Dose Level (mg base/kg)	Males	<u>Females</u>
25	0/2	0/2
125	1/2	0/2
250	-	1/2
500	2/2	2/2

anumber of deaths/number of animals in group.

4.1B WR269410

4.1B.1 Gavage

4.1B.1.1 Clinical Signs

800 mg/kg: rough coat, hunched posture

1000 mg/kg: rough coat, blue feet, decreased activity, lethargic, ataxia,

comatose, found dead

1200 mg/kg: lethargic, comatose, found dead

1600 mg/kg: rough coat, hunched posture, decreased activity, lethargic,

comatose, found dead



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4.1B.1.2 Mortality

	Mortality ^a	
Dose Level (mg/kg)	Males	<u>Females</u>
800 1000	0/2 1/2	0/2 2/2
1200	2/2	2/2
1600 anumber of deaths/number	of animals in group.	2/2

4.1B.2 Intraperitoneal

4.1B.2.1 Clinical Signs

WR269410 in 1% Methylcellulose/0.4% Tween 80

200 mg/kg: rough coat 400 mg/kg: rough coat

800 mg/kg: rough coat, hunched posture, decreased activity

1600 mg/kg: unable to dose animals

WR269410 in PEG 200

0 mg/kg: (5 ml/kg) rough coat, hunched posture, decreased activity (♀ only dosed)

0 mg/kg: (10 ml/kg) rough coat, hunched posture, decreased activity, lethargic

(& only dosed)

50 mg/kg: rough coat, hunched posture, blue feet, labored breathing, decreased

activity, lethargic

150 mg/kg: rough coat, hunched posture, blue feet, decreased activity, labored

breathing, comatose, found dead

250 mg/kg: rough coat, hunched posture, labored breathing, decreased activity, lethargic, dark material on leg and food

375 mg/kg: rough coat, hunched posture, labored breathing, decreased activity, comatose, found dead

500 mg/kg: (5 ml/kg) rough coat, blue feet, lethargic, shallow breathing,

labored breathing, comatose, found dead 500 mg/kg: (10 ml/kg) rough coat, hunched posture, blue feet, decreased activity,

shallow breathing, lethargic, comatose, found dead

1000 mg/kg: found dead



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4.1B.2.2 Mortality

	Mortality*	
Dose Level (mg/kg)	Males	Females
⁶ 200	0/2	0/2
400	0/2	0/2
800	0/2	0/2
°0 (5ml/kg)	-	0/1
0 (10 ml/kg)	0/1	-
50	0/2	0/2
150	2/2	1/2
250	0/2	0/2
375	1/2	2/2
500 (5ml/kg)	2/2	2/2
500 (10ml/kg)	2/2	1/2
1000	2/2	2/2

^anumber of deaths/number of animals in group. ^bWR269410 in 1% Methylcellulose/0.4% Tween 80

4.2 Acute Toxicity Test

4.2A WR242511 Tartrate

4.2A.1 Gavage

4.2A.1.1 Dosage Formulation Analysis

Dosage formulation analysis is shown in Table 2 and is described with the analytical chemistry methodology in Appendix 1. All test article dosage formulations were within 10% of their intended concentration.

4.2A.1.2 Clinical Signs

A summary of clinical signs is shown in Tables 3 and 4 and individual data is shown in Appendix 3. Clinical signs of toxicity (hunched posture, decreased activity) were seen with increasing incidence as a function of dose levels in surviving animals. Rough coat was observed in all dose levels.

4.2A.1.3 Body Weight

A summary of body weights and body weight gains is shown in Tables 5 and 6; males and in Tables 7 and 8; females, and individual data for both sexes is shown in Appendix 4. In males, body weights and body weight gains were generally unaffected by test article treatment for those animals which survived the fourteen day observation period. At higher dose levels (110 mg base/kg and above), surviving females lost weight in the first week and their total weight gain was less than lower dose animals.

[°]WR269410 in PEG 200

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4.2A.1.4 Necropsy

The individual necropsy observations are in Appendix 5. Gross lesions observed in the WR242511 tartrate-treated males included: at 10 mg base/kg (red fluid in cranial cavity, splenic enlargement and liver enlargement); at 15 mg base/kg (liver enlargement, red fluid in cranial cavity, and splenic enlargement); at 16.5 mg base/kg (mottled lesions on kidney); at 20 mg base/kg (liver enlargement, red fluid in cranial cavity, and heart enlargement); at 25 mg base/kg (liver enlargement and mottled pigmentation); at 35 mg base/kg (liver enlargement, kidney enlargement, red fluid in cranial cavity, and mottled pigmentation); and at 50 mg base/kg (liver enlargement and mottled pigmentation, red fluid in cranial cavity, and kidney enlargement).

Gross lesions observed in females included: 20 mg base/kg (red fluid in the cranial cavity); at 110 mg base/kg (splenic enlargement); at 250 mg base/kg (red fluid in cranial cavity; splenic enlargement, liver enlargement, and kidney discoloration); and at 600 mg base/kg (red fluid in the cranial cavity).

4.2A.1.5 Mortality

Dose-mortality data are shown in Table 9. The oral LD50 (and its 95% confidence interval) of WR242511 tartrate for males are 16.3 (13.8 to 19.4) mg base/kg. The dose-mortality curve slope (probit/log dose) is 8.27. For females, the corresponding data are 135 (77 to 236) mg base/kg. The dose-mortality curve slope (probit/log dose) is 3.58. The LD50 and corresponding values were calculated by the method of Litchfield and Wilcoxon (1949) and is shown in Appendix 6.

4.2A.2 Intraperitoneal

4.2A.2.1 Dosage Formulation Analysis

Dosage formulation analysis is shown in Table 2 and is described with the analytical chemistry methodology in Appendix 1. All test article dosage formulations were within 10% of their intended concentration.

4.2A.2.2 Clinical Signs

A summary of clinical signs is shown in Tables 3 and 4 and individual data is shown in Appendix 3. Significant clinical signs of toxicity at lower doses included rough coat and hunched posture. Decreased activity, blue feet, and abdominal bloating were observed in increasing incidence in surviving animals as a function of dose level. Additionally, labored breathing, lethargy, and dark material on the face were also sporadically observed.

4.2A.2.3 Body Weight

A summary of body weights and body weight gains is shown in Tables 5 and 6; males and in Tables 7 and 8; females, and individual data for both sexes is shown in Appendix 4. In males, body weight loss was observed in all surviving animals except the two lowest dose levels in the first week, and body weight and total weight gains were less in these animals compared to the lower dose levels. In females, body weight and body weight gains were generally

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unaffected by test article treatment for those animals which survived the fourteen day observation period.

4.2A.2.4 Necropsy

The individual necropsy observations are in Appendix 5. Gross lesions observed in the WR242511 tartrate-treated males included: at 10 mg base/kg (scar on a liver); at 16.5 mg base/kg (scar on a liver); at 20 mg base/kg (red fluid in cranial cavity, dilation of cecum and colon, fluid in abdominal cavity, and enlargement of the adrenal glands); at 50 mg base/kg (red fluid in the cranial cavity and fluid in the abdominal cavity); at 110 mg base/kg (red fluid in the cranial cavity and fluid in the abdominal cavity); at 250 mg base/kg (red fluid in the cranial cavity, fluid in the abdominal cavity, and irregular pigmentation of a liver); and at 600 mg base/kg (red fluid in the cranial cavity, fluid in the abdominal cavity, and irregular pigmentation of the liver).

Gross lesions observed in the WR242511 tartrate-treated females include: at 5 mg base/kg (lesions on kidneys); at 10 mg base/kg (fluid in pericardium); at 16.5 mg base/kg (scar on a liver, adhesion on a liver and stomach dilation); at 20 mg base/kg (red fluid in cranial cavity, dilation of cecum and colon, fluid in abdominal cavity, irregular pigmentation of a liver and enlargement of the heart); at 30 mg base/kg (adhesions on the liver); at 50 mg base/kg (red fluid in the cranial cavity, fluid in the abdominal cavity and irregular liver pigmentation); at 110 mg base/kg (red fluid in the cranial cavity, fluid in the abdominal cavity, fluid in the abdominal cavity, splenic enlargement, hole in abdominal wall, and irregular pigmentation of a liver); and at 600 mg base/kg (red fluid in the cranial cavity, fluid in the abdominal cavity, and irregular pigmentation of a liver).

4.2A.2.5 Mortality

Dose-mortality data are shown in Table 9. The intraperitoneal LD50 of WR242511 tartrate for males is 23 mg base/kg with a 95% confidence interval of 14 to 37 mg base/kg. The dose-mortality curve slope (probit/log dose) is 2.68. The intraperitoneal LD50 of WR242511 tartrate for females is 30 mg base/kg with a 95% confidence interval of 14 to 66 mg base/kg. The dose-mortality curve slope (probit/log dose) is 1.49. The LD50 and corresponding values were calculated by the method of Litchfield and Wilcoxon (1949) and is shown in Appendix 6.

4.2B WR269410

4.2B.1 Gavage

4.2B.1.1 Dosage Formulation Analysis

Dosage formulation analysis is shown in Table 2 and Appendix 2. All test article dosage formulations were within 10% of their intended concentration.

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4.2B.1.2 Clinical Signs

A summary of clinical signs is shown in Tables 3 and 4 and individual data is shown in Appendix 3. Signs of toxicity observed in high dose animals included labored breathing, ataxia, comatose state, blue feet, and rough coat. In lower dose animals, rough coats, blue feet, hunched posture, and decreased activity (except of the lowest dose level) was seen in both sexes.

4.2B.1.3 Body Weight

A summary of body weights and body weight gains is shown in Tables 5 and 6; males and in Tables 7 and 8; females, and individual data for both sexes is shown in Appendix 4. All surviving animals gained weight, and Appendix 4), but surviving animals administered higher doses of WR269410 gained less weight than animals treated at lower dose levels.

4.2B.1.4 Necropsy

Individual necropsy data are in Appendix 5. Gross lesions observed in several of the WR269410-treated males include: at 550 mg/kg (lesions on a kidney and a spleen); at 700 mg/kg (lesions on a kidney); at 900 mg/kg (red fluid in cranial cavity and mottled pigmentation and enlargement of a liver); at 1150 mg/kg (lesions on a kidney); and at 1500 mg/kg (mottled pigmentation of a liver).

Gross lesions observed in several of the WR269410-treated females included: at 550 mg/kg (spots on lungs); and at 1500 mg/kg (red fluid in cranial cavity, mottled pigmentation of a liver, spots on a lung, and enlargement of the adrenal glands).

4.2B.1.5 Mortality

Dose-mortality data are shown in Table 9. The oral LD50 (and its 95% confidence interval) of WR269410 for males are 420 (219 to 806) mg/kg. The dose-mortality curve slope (probit/log dose) is 1.54. For females, the corresponding data are 147 (70 to 310) mg/kg. The dose-mortality curve slope (probit/log dose) is 1.44. The LD50 and corresponding values were calculated by the method of Litchfield and Wilcoxon (1949) and are shown in Appendix 6.

4.2B.2 Intraperitoneal

4.2B.2.1 Dosage Formulation Analysis

Dosage formulation analysis is shown in Table 2 and Appendix 2. Three of the five test article dosage formulations were outside of 10% of their intended concentration. The dosage formulation of 6.0 mg/ml, the 30 mg/kg treated animals, was administered in 15.0 % excess of its intended concentration. The dosage formulation of 12 mg/ml, the 60 mg/kg treated animals, was administered in 29.2 % deficiency of its intended concentration. Finally, the dosage formulation of 50.0 mg/ml, the 250 mg/kg treated animals, was administered in 14.2 % excess of its intended concentration. These dosage formulations were administered outside of their intended concentration because the results of the analysis were not released prior to dosing, as it was performed

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at the University of Iowa. Because these deviations would significantly affect the determination of LD50 values, the dose-mortality data utilized the actual dose levels administered rather than the intended dose levels, and the LD50s are determined from these values.

4.2B.2.2 Clinical Signs

A summary of clinical signs is shown in Tables 3 and 4 and individual data is shown in Appendix 3. Signs of toxicity (rough coat, hunched posture, blue feet, decreased activity, and lethargy) were observed in all treatment groups. Labored breathing and comatose state were primarily limited to the higher dose levels.

4.2B.2.3 Body Weight

A summary of body weights and body weight gains is shown in Tables 5 and 6; males and in Tables 7 and 8; females, and individual data for both sexes is shown in Appendix 4.Body weights and body weight gains were generally unaffected by test article treatment for those animals which survived the fourteen day observation period.

4.2B.2.4 Necropsy

The individual necropsy data are shown in Appendix 5. Gross lesions observed in the majority of WR269410-treated males included: at 30 mg/kg (irregular pigmentation or lesions on kidney, scarring on spleen, and liver lesions); at 60 mg/kg (scarring on the spleen, irregularly shaped or adhesions on livers, irregular pigmentation of kidney, heart enlargement, and fluid in cranial cavity); at 125 mg/kg (tan lungs, red fluid in cranial cavity, and pigmentation of testicle); at 250 mg/kg (splenic enlargement and red fluid in cranial cavity); and at 500 mg/kg (tan-dark lung, fluid in abdominal cavity, and red fluid in cranial cavity).

Gross lesions observed in the WR269410-treated females included: at 30 mg/kg (scarring of kidney, scarring and enlargement of spleen, and liver adhesions and deformities); at 60 mg/kg (irregular pigmentation of kidney, scarring and enlargement of spleen, enlargement of heart, fluid in cranial cavity, and liver adhesions and deformities); at 125 mg/kg (tan lungs and red fluid in cranial cavity); at 250 mg/kg (tan-dark lung, red fluid in cranial cavity, and fluid in abdominal cavity); and at 500 mg/kg (tan-dark lung, fluid in abdominal cavity, and red fluid in cranial cavity)

4.2B.2.5 Mortality

The dose-mortality data are shown in Table 9. The intraperitoneal LD50 of WR26941 for male rats is 155 mg/kg with a 95% confidence interval of 59 to 408 mg/kg. The dose-mortality curve slope (probit/log dose) is 2.08. (Appendix 6). For female rats, an intraperitoneal LD50 was estimated from log-probability paper to be approximately 70 - 80 mg/kg. This could not be further defined as the incidence of mortality at two juxtaposed dose levels, 43 and 134 mg/kg, were 0% and 100%, respectively.

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5.0 DISCUSSION/CONCLUSION

This study determined and compared the acute oral and intraperitoneal toxicity of WR242511 tartrate and WR269410 in male and female rats. The oral LD50 of WR242511 tartrate for male rats was 16.3 mg base/kg with a 95% confidence interval of 13.8 to 19.4 mg base/kg and the dose-mortality curve slope (probit/log dose) was 8.27. The calculated LD50 for female rats was 135 mg base/kg with a 95% confidence interval of 77 to 236 mg base/kg and the dose-mortality curve slope (probit/log dose) was 3.58. The data show that the LD50 value for males is approximately eight-fold lower than for female rats. Thus, a significant sex difference exists in the acute oral toxicity of WR242511 tartrate.

The calculated intraperitoneal LD50 of WR242511 tartrate in males was 23 mg base/kg with a 95% confidence interval of 14 to 37 mg base/kg and the dose-mortality curve slope (probit/log dose) was 2.68. In females, the LD50 was 30 mg base/kg with a 95% confidence interval of 14 to 66 mg base/kg and the dose-mortality curve slope (probit/log dose) was 1.49. Because of the similarity of the LD50 values, and the overlap of the 95% confidence intervals, no significant difference exists between the sexes in the acute intraperitoneal toxicity of WR242511 tartrate. Further, the LD50 values obtained from both sexes for the intraperitoneal administration of WR242511 tartrate were not significantly different from the LD50 value from males given the test article orally. However, female rats appear significantly less sensitive to the acute oral toxicity of WR242511 tartrate compared to intraperitoneal administration.

In the oral acute toxicity test of WR269410, the oral LD50 for male rats was 420 mg/kg with a 95% confidence interval of 219 to 806 mg/kg and the dose-mortality curve slope (probit/log dose) was 1.54. The calculated LD50 for female rats was 147 mg/kg with a 95% confidence interval of 70 to 310 mg/kg and the dose-mortality curve slope (probit/log dose) was 1.44. Based on these results, female rats appear to be moderately more sensitive to oral WR269410 administration than males. Although slight overlap of the two 95% confidence limits occurred, the LD50 in males was about three times higher than in females.

In the initial range-finding tests, WR269410 was administered in 0.1% Methylcellulose/0.4% Tween 80. Due to the physical inability to intraperitoneally administer WR269410 dosage formulations at high enough concentrations to produce lethality, WR269410 was subsequently administered intraperitoneally as a solution in polyethylene glycol 200 (PEG 200) after consultation with the Sponsor. From the results of the toxicity test, the calculated intraperitoneal LD50 of WR269410 in males was 156 mg/kg with a 95% confidence interval of 59 to 408 mg/kg and a dose-mortality curve slope (probit/log dose) was 2.08. An LD50 value was estimated in females to be apparently 70 - 80 mg/kg. These data obtained in this study suggest that WR242511 tartrate is more toxic than WR269410 when administered orally. Based on the oral LD50 data and after consultation with the Sponsor, the following dose levels are suggested to be used in the two week oral dose range-finding studies in rats of WR242511 tartrate; 0, 0.5, 2.0, and 6.2 mg base/kg/day, and of WR269410; 0, 2.0, 6.0, 18.0 mg/kg/day.

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6.0 PERSONNEL:

Study Director Toxicologist Pathologist

Pathology Support Analytical Chemist Clinical Veterinarian Veterinarian Support

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Report preparation was assisted by Clyde W. Wheeler, Ph.D. and Teresa O'Neill, B.S..

7.0 ARCHIVES

The raw data, test article reserve sample and final report are archived at the Toxicology Research Laboratory (TRL), University of Illinois at Chicago (UIC), Department of Pharmacology, 1940 W. Taylor St., Chicago, IL 60612-7353.

8.0 REFERENCE

Litchfield, J.T. and Wilcoxon, F. (1949). A simplified method of evaluating dose-effect experiments. J. Pharmacol. Exp. Ther. 96, 99-115.



ACUTE ORAL AND INTRAPERITONEAL TOXICITY STUDY OF WR242511 AND WR269410 IN RATS

Calculated LD50 Values

WR242511 Tartrate

Route	Sex	LD50 (mg base/kg)	95% Confidence Interval (mg base/kg)	Dose- Mortality Curve Slope (probit/log dose)
Oral	Male	16.3	13.8 - 19.4	8.27
Oral	Female	135	77 - 236	3.58
	Male	23 7, 32	14 - 37	2.68
Intraperitoneal	Female	30	14 - 66	1.49

WR269410

Route	Sex	LD50 (mg/kg)	95% Confidence Interval (mg/kg)	Dose-Mortality Curve Slope (probit/log dose)
Oral	Male	4207, 603	219 - 806	1.54
Oral	Female	147	70 - 310	1.44
T	Male	155	59 - 408	2.08
Intraperitoneal	Female	70 - 80(est.)	***	

ACUTE ORAL AND INTRAPERITONEAL TOXICITY STUDY OF WR242511 AND WR269410 IN RATS

Dosage Formulation Analysis^a

WR242511 Tartrate (Gavage)

Target Concentration (mg base/ml)	Actual Concentration (mg base/ml) ^b	% Target
2.0	1.90 <u>+</u> 0.0078	95.0
3.0	2.74 ± 0.0023	91.3
4.0	3.97 ± 0.0077	99.2
5.0	4.58 ± 0.0124	91.6
7.0	6.41 ± 0.0109	91.5
10	9.71 ± 0.0889	97.1
22	21.50 ± 0.1055	97.7
50	49.59 ± 0.1897	99.2
120	123.67 ± 0.4024	101.4

WR242511 Tartrate (Intraperitoneal)

Target Concentration (mg base/ml)	Actual Concentration (mg base/ml) ^b	% Target
1.0	1.00 ± 0.0039	100.0
2.0	1.94 ± 0.0139	97.0
3.3	3.29 ± 0.0241	99.7
4.0	3.97 ± 0.0077	99.2
6.0	6.37 ± 0.0770	106.2
10	9.71 ± 0.0889	97.1
22	21.50 ± 0.1055	97.7
50	49.59 ± 0.1897	99.2
120	123.67 ± 0.4024	101.4

^{*}Mean ± standard deviation for triplicate runs.

^bThe samples were assayed within 24 hours prior to use on Day 0.



ACUTE ORAL AND INTRAPERITONEAL TOXICITY STUDY OF WR242511 AND WR269410 IN RATS

Dosage Formulation Analysis^a

WR269410 (Gavage)

Target Concentration (mg/ml)	Actual Concentration (mg/ml) ^b	% Target
2.0	2.13 ± 0.0034	106.5 107.5
4.0 7.5	$4.30 \pm 0.0601 \\ 7.82 \pm 0.0264$	104.3
7.5 11.5	8.08 ± 0.1122 11.46 + 0.0310	107.7 99.7
17.5 27.5	$\begin{array}{c} -19.03 \pm 0.1575 \\ 26.70 + 0.2284 \end{array}$	108.7 97.1
35.0	34.91 ± 0.2858	99.7
45.0 57.5	47.34 ± 0.1992 61.53 ± 0.1389	105.2 107.0
75.0	71.45 ± 0.2701	95.3

WR269410 (Intraperitoneal)

Target Concentration (mg/ml)	Actual Concentration (mg/ml) ^b	% Target	Dose Level Administered (mg/kg)
6.0	6.9	115.0	35
12	8.5	70.8	43
25	- 26.7	106.8	134
50	42.9	85.8	215
100	94.5	94.5	473

^{*}Mean + standard deviation for triplicate runs.

^bThe samples were assayed within 24 hours prior to use on Day 0.

Table 3.1

ACUTE ORAL TOXICITY STUDY
OF WR242511 IN RATS

					של הלו			
	SUMMAR	Y OF CI	INICAL	SIGNS				
STUDY: 104P024			SEX:	MALE				
DOSE:(mg/kg) GROUP:	10 1-M	15 2-M	20 3-M	25 4-M	35 5-M	50 6-M	110 7-M	250 8-M
Scheduled Sacrifice Animal Found Dead Decreased Activity Ataxia Dark Material Around Nose Hunched Posture Labored Breathing Lethargic Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Hunched Posture 3	5 0 0 0 0 1 0 0 5 0 0 2 5 0	50000040050250	0 5 3 0 0 0 0 0 0 5 0	0 5 2 0 0 0 0 0 0 0 5 0	0 5 4 0 1 3 1 1 5 2 4 5 1	0 5 4 1 0 5 0 0 5 2 2 5 2	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Total Number of Animals	5	5	5	5	5	5	0	0

Table 3.1 (Continued)

ACUTE ORAL TOXICITY STUDY OF WR242511 IN RATS

	5	77
		-

	SUMMARY OF CLINICAL	SIGNS	
STUDY: 104P024	SEX:	MALE	
	DOSE:(mg/kg) GROUP:	600 9-M	
	Scheduled Sacrifice Animal Found Dead Decreased Activity Ataxia Dark Material Around Nose Hunched Posture Labored Breathing Lethargic Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Hunched Posture 3 Total Number of Animals	0 0 0 0 0 0 0 0 0	

Table 3.2

ACUTE ORAL TOXICITY STUDY OF WR242511 IN RATS

	SUMM	ARY OF CLINICA	L SIGNS		
STUDY: 104	PO4A	SEX:	MALE		
		DOSE:(mg/kg) GROUP:		8.0 2-M	
	Scheduled Sacr Animal Found D Activity Decre Hunched Postur Rough Coat Hunched Postur Hunched Postur Rough Coat 1 Rough Coat 2 Rough Coat 3	ead ased e	2 3 1 5 5 3 5 3 5	1 4 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	

Total Number of Animals

Table 3.3

ACUTE INTRAPERITONEAL TOXICITY STUDY OF WR242511 IN RATS

	OF WR2425				AFT		
SUMMARY OF CLINICAL SIGNS							
STUDY: 104IP24	5	EX: MA	LE				
DOSE:(mg/kg) GROUP:	20 1-M	50 2-M	110 3-M	250 4-M	600 5-M		
Scheduled Sacrifice Animal Found Dead Decreased Activity Dark Material Around Eyes Dark Material Around Nose Hunched Posture Labored Breathing Lethargic Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Decreased Activity 1 Decreased Activity 2 Decreased Activity 3 Hunched Posture 1 Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Blue Feet 2 Blue Feet 3 Abdomenal Lesion Lethargic 2	144235115555553305500100	05100300355530505532000	0500000053152153120000	1 4 1 0 1 1 0 0 1 5 2 1 4 1 1 5 2 1 1 0 1	05000000532031300000		
Total Number of Animals	5	5	5	5	5		

Table 3.4

ACUTE INTRAPERITONEAL TOXICITY STUDY OF WR242511 IN RATS

		SUMMARY OF	CLINICAL	SIGNS	3		
•	STUDY: 104IP4	3	SEX:	MALE			
		DOSE:(mg/kg) GROUP:	5 1-M	10 2-M	16.5 3-M	30 4-M	
		cheduled Sacrifice nimal Found Dead	5	5	4	2	
	A	ctivity Decreased ark Material Around Eyes	1	4	5	4	
	D	ark Material Around Nose unched Posture	0	1	4	1	
	R	ough Coat unched Posture 1	5	5	5	5	
	• н	unched Posture 2 unched Posture 3	4 5	5	5	5	
	R	ough Coat 1	3 5	5	5	4	
	R	ough Coat 3 bdomen Bloated	5	5	5	5 3	
	Tot	al Number of Animals	5	5	5	5	

Table 3.5

ACUTE ORAL TOXICITY STUDY

OF WR269410 IN RATS				B	P.
---------------------	--	--	--	---	----

		SUMMAR	Y OF	CLI	NICAL S	IGNS			
STUDY:	104P026			5	SEX: MA	LE			
		DOSE:(mg/kg) GROUP:		550 1-M	700 2-M	900 3-м	1150 4-M	1500 5-M	
	Scheduled Sacri Animal Found De Decreased Activ Ataxia Comatose Dark Material A Dark Material A Hunched Posture Labored Breathi Lethargic Rough Coat 1 Rough Coat 2 Rough Coat 3 Blue Feet 3 Hunched Posture Hunched Posture Hunched Posture Hunched Posture Hunched Posture Hunched Posture Comatose 1 Comatose 1 Comatose 2 Comatose 3 Lethargic 1 Lethargic 2 Lethargic 3 Ataxia 1 Ataxia 2 Labored Breathi Labored Breathi Labored Breathi	oround Eyes round Nose ng 1 2 3 ity 1 ity 2 ity 3	¥	324020030055555555500231212212100203 5	32400004115555555511112122121300334 5	1421111203555355500000444111105555	23210002103555355500000024431101444 5	051400111304555455500000012343200555 5	
						-	-	-	

Table 3.6

ACUTE ORAL TOXICITY STUDY OF

WR26	59 4 1	ô'ĬŇ'ŔAŤ	S		B	
SUMMARY	OF	CLINICAL	SIGNS	 		

	SUMMARY OF	CLINICAL SI	GNS				
STUDY: 104P06A	SEX: MALE						
	DOSE:(mg/kg) GROUP:	150 1-M	230 2-M	350 3-M			
	Scheduled Sacrifice Animal Found Dead	0	3	1 4			
	Activity Decreased	ŏ	4	2			
	Ataxia Dark Material Around Eyes	0	1	1			
	Hunched Posture	ő	3	i			
	Rough Coat Activity Decreased 1	0	4	2			
	Activity Decreased 2	ŏ	5	2			
	Activity Decreased 3 Hunched Posture 1	0	4	2			
	Hunched Posture 2	ŏ	3	2			
	Hunched Posture 3 Rough Coat 1	0	2	1			
	Rough Coat 2	ō	3	1			
	Rough Coat 3 Comatose 1	0	5	1			
	Comatose 2	0	0	2			
	Comatose 3 Blue Feet	0	4	2			
	Blue Feet 1	0	5	4			
	Blue Feet 2 Blue Feet 3	0	5	4			
	Blue Tail	0	2	0			
Т	otal Number of Animals	0	5	5			

Table 3.7

TODI			
		5	T

•••••••		SUMMARY OF C	LINICAL S	IGNS			
STUDY:	104P06B	SEX: MALE					
		DOSE:(mg/kg) GROUP:	40 1-M	80 2- M	150 3-M		
		Scheduled Sacrifice	-				
		Decreased Activity	2	2	5		
		Hunched Posture	0		0		
			5	2	5		
		Rough Coat	2	2	2		
		Blue Feet	0	2	2		
		Rough Coat 1	2	5	2		
		Rough Coat 2	5	2	2		
		Rough Coat 3	2	2	2		
		Blue Feet 1	3	2	5		
		Blue Feet 2	2	2	5		
		Blue Feet 3	5	>	5		
		Decreased Activity Decreased Activity	0	4	2		
		Decreased Activity	0	4	2 .		
		Hunched Posture 1	0	5	2		
		Hunched Posture 2	4	2	2		
		Hunched Posture 3	2	4 E	2		
		Labored Breathing 3	2	3	2		
		Blue Tail	0	Ô	1		
			_				
	1	Total Number of Animals	5	5	5		

Table 3.8

ACUTE INTRAPERITONEAL STUDY
OF WR269410 IN RATS

		SUMMARY	OF CLIN	NICAL S	IGNS			
ST	UDY: 104IP26		5	EX: MA	LE			
		PSE:(mg/kg) OUP:	30 1-M	60 2-M	125 3-M	250 4-M	500 5-M	
	Scheduled Sacrifi Animal Found Dead Decreased Activit Dark Material Aro Hunched Posture Lethargic Rough Coat Blue Feet Hunched Posture # Hunched Posture # Hunched Posture # Decreased Activit Decreased Activit Decreased Activit Rough Coat #1 Rough Coat #2 Rough Coat #3 Blue Feet #1 Blue Feet #1 Blue Feet #3 Lethargic #1 Lethargic #3 Lethargic #3 Labored Breathing Labored Breathing	ce y und Nose 1 2 3 y #1 y #2 y #3	5 0 1 1 5 0 5 0 3 4 5 1 2 4 2 4 3 5 5 5 5 5 5 6 6 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7	504050500452035555553520000	2320313102220245555512133332	2320202122222555550003333333	1 1 1 1 1 1 1 1 1 1 2 0 0 5 3 3 5 3 3 0 1 1 3 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	•
	Comatose #2 Comatose #3		0	0	3 2	3	2	
	Total Number of Ania	mals	5	5	5	5	5	

Table 4.1

	OF W	R242511	IN RA	ršToby		FT		
	SUMMAR	Y OF CI	INICAL	SIGNS				
STUDY: 104P024		S	EX: FE	MALE				
DOSE:(mg/kg) GROUP:	10 1-F	15 2-F	20 3-F	25 4-F	35 5-F	50 6-F	110 7-F	250 8-F
Scheduled Sacrifice Animal Found Dead Decreased Activity Ataxia Dark Material Around Eyes Dark Material Around Nose Hunched Posture Labored Breathing Rough Coat Rough Coat Rough Coat 2 Rough Coat 3 Hunched Posture2 Hunched Posture 3 Decreased Activity 2 Decreased Activity 3	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	500000000000000000000000000000000000000	000000000000000000000000000000000000000	000000000000000000000000000000000000000	5000000405050200	3 2 4 0 0 0 0 5 0 5 0 5 2 4 0 0 0 0	1 4 2 1 2 1 5 1 5 5 5 0 5 0 1
Total Number of Animals	0	0	5	0	0	5	5	5

Table 4.1 (Continued)

••••	SUMMARY OF CLINIC	CAL SIGNS	
STUDY: 104P024	SEX:	FEMALE	
	DOSE:(mg/kg) GROUP:	600 9- F	
•••••	Scheduled Sacrifice Animal Found Dead	0	
	Decreased Activity Ataxia	2	
	Dark Material Around Eyes Dark Material Around Nose	0	
	Hunched Posture Labored Breathing Rough Coat	2 0 2	
	Rough Coat 2 Rough Coat 3	· 5	
	Hunched Posture2 Hunched Posture 3	5	
	Decreased Activity 2 Decreased Activity 3	2 0	
	Total Number of Animals	5	

Table 4.2

ACUTE INTRAPERITONEAL TOXICITY

TI				
5			F	57
	107	///	15	
U		101		
		11 11		-

 SUMMARY OF CLINICAL SIGNS									
 STUDY:	104IP24			SEX:	FEMALE			•••••••••••••••••••••••••••••••••••••••	
 		DOSE:(mg/kg) GROUP:	2 1-	:0 F	50 2-F	110 3-F	250 4-F	600 5-F	
	Scheduled Sacr Animal Found O Oecreased Acti Oark Material Hunched Postur Lethargic Rough Coat 1 Rough Coat 2 Rough Coat 3 Oecreased Acti Decreased Acti Decreased Acti Hunched Postur Hunched Postur Hunched Postur Blue Feet 1 Blue Feet 2 Blue Feet 3 Abdomen Bloate Lethargic 1 Lethargic 3	ead vity Around Nose e vity 1 vity 2 vity 3 e 1 e 2 e 3	23025155550002550004000	1	051251555555550524000	0 5 1 0 1 0 1 5 2 2 4 0 1 5 1 2 0 1 2 0 1 1 0 0 1 1 1 0 0 1 1 0 0 1 1 1 0 0 1 1 1 0 0 1 1 1 1 0 0 1	0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 5 0 0 0 0 0 0 5 1 1 0 3 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0	
	Total Number of	Animals	5		5	5	5	5	

Table 4.3

ACUTE INTRAPERITONEAL TOXICITY STUDY OF WR242511 IN RATS

00	13	1
$\Box \Box$	u	

	SUMMARY OF	CLINICAL	SIGNS	3		
STUDY: 104IP4A		SEX: FE	MALE			
	DOSE:(mg/kg)	5	10	16.5	30	
	GROUP:	1-F	2-F	3-F	4-F	
O. b. dulad Conn	: 6:	•		-		
Scheduled Sacr		2	5	5	2	
Animal Found D		0	0	0	3	
Activity Decre	ased	3	4	3	3	
Hunched Posture	e	5	5	5	5	
Rough Coat		5	5	5	5	
Activity Decre	ased 1	0	0	0	1	
Activity Decre		0	0	0	1	
Hunched Postur		0	5	5	5	
Hunched Posture		5	5	5	ś	
Hunched Posture		Š	5	É	í	
	6.3	2	3	2	2	
Rough Coat 1		4	2	2	2	
Rough Coat 2		1	2	5	2	
Rough Coat 3		5	5	5	5	
Blue Feet		0	0	0	2	
Abdomen Bloate	d	0	0	3	4	
Total Number of	Animals	5	5	5	5	

Table 4.4

ACUTE ORAL TOXICITY STUDY

OF WR269410 IN RATS			B	T		
SUMMARY OF CLINICAL SIG	NS	 			 	

	SUMMARY	OF CLINI	ICAL S	IGNS			
 STUDY:	104P026	SEX	FEMA	LE			
	DOSE:(mg/kg)	550	700	900	1150	1500	
	GROUP:	1-F	2-F	3-F	4-F	5-F	
	Scheduled Sacrifice	1	1	0	2	0	
	Animal Found Dead	4	4	5	3	5	
	Decreased Activity	1	1	0	4	1	
	Ataxia	0	0	0	1	1	
	Comatose	1	0	0	1	1	
	Dark Material Around Eyes Hunched Posture	4	0	0]	0	
	Labored Breathing	1	0	0	4	1	
	Rough Coat	2	1	0	1 5	2	
	First Clinical Sign	1	Ó	1	0	2	
	Second Clinical Sign	ó	1	1	Ö	ō	
	Third Clinical Sign	1	i	1	Ö	Ö	
	Rough Coat 1	4	5		4	3	
	Rough Coat 2	4	4	4 3 2	5	3	
	Rough Coat 3	3	3	2	5	3	
	Blue Feet	2	1	0	5	3 3 2 3	
	Blue Feet 1	4	5	4	5	3	
	Blue Feet 2	4	4	3 2	5	3	
	Blue Feet 3	3	3	2	5 5 5 5 5 5 5 2 2 2 2 2 2 3 3	3	
	Hunched Posture 1	0	1	0	2	0	
	Hunched Posture 2	1	1	0	2	0	
	Hunched Posture 3 Decreased Activity 1	0	1	0	2	0	
	Decreased Activity 2	0	1	0	2	0	
	Decreased Activity 3	1	Ó	0	7	0	
	Comatose 1	3			1	1	
	Comatose 2	2	3	3	2	2	
	Comatose 3	2	3 2	4 3 2	1	2	
	Lethargic 1	1	0	0	2 3	2	
	Lethargic 2	2	0	0	3	1	
	Lethargic 3	0	1	0	1	1	
	Ataxia 2	0	0	0	2	0	
	Ataxia 3	1	0	0	2	0	
	Labored Breathing 1 Labored Breathing 2	3 3	3	4	2 2 2 3 3	3	
	Labored Breathing 2	2	2	3 2	3	3 2	
	Tip of Tail Darkened	0	0	0	3	0	
	End Half of Tail Darkened	0	0	0	1	0	
	with military that a marriage	•		0		o .	
	Total Number of Animals	5	5	5	5	5	
						_	

Table 4.5

ACUTE ORAL TOXICITY STUDY OF WR269410 IN RATS

		SUMMARY OF	CLINI	CAL	SIGNS		
 STUDY:	104P06A		SEX:	FEM	IALE	•	
		0005-44		450	-70	750	
		DOSE:(mg/kg) GROUP:		150	230	350	
 		GROUP:		1-F	2-F	3-F	
		Scheduled Sacrifice		3	0	1	
		Animal Found Dead		2	5	4	
		Activity Decreased		4	n	1	
		Comatose		1	Ô	ò	
		Hunched Posture		ż	Ŏ	1	
		Labored Breathing		1	0	0	
				,	0	1	
		Rough Coat		4	0	1	
		Activity Decreased 1		4	1	1	
		Activity Decreased 2		4	Ü	1	
		Activity Decreased 3		4	0	1	
		Hunched Posture 1		4	0	1	
		Hunched Posture 2		4	0	1	
		Hunched Posture 3		4	0	1	
		Rough Coat 1		1	2	3	
		Rough Coat 2		4	1	3	
		Rough Coat 3		3	3	3	
		Comatose 1		0	4	3	
		Comatose 2		0	4	2	
		Comatose 3		0	4	2	
		Blue Feet		3	n	1	
		Blue Feet 1		4	5	4	
		Blue Feet 2		1	1	7	
		Blue Feet 3		3	7.	7	
		Blue Tail		1	0	1	
		blue fait		1	U	4	
	Т	otal Number of Animals		5	5	5	

	A	B	7
TCNC			

							ו ניט ני	Ш	
			SUMMARY OF	CLINIC	CAL S	IGNS			
S	rudy:	104P06B		SEX:	FEMA	LE			
			DOSE:(mg/kg) GROUP:		40 1-F	80 2-F	150 3-F		
			Scheduled Sacrifice Decreased Activity Hunched Posture Rough Coat Blue Feet Rough Coat 1 Rough Coat 2 Rough Coat 3 Blue Feet 1 Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Activity Decreased Activity Hunched Posture 1 Hunched Posture 2 Hunched Posture 3		50551555550005555	525555555555555555555555555555555555555	0 0 0 0 0 0 0 0		
		Т	Blue Tail otal Number of Animals		5	2 5	0		

Table 4.7

ACUTE INTRAPERITONEAL STUDY

	20	3	7
_			

•••••••••••••••••••••••••••••••••••••••	SUMMARY OF	CLINIC	CAL SIG	ns		•••••
STUDY: 104IP26		SEX:	FEMALE			
	DOSE:(mg/kg) GROUP:	30 1-F	60 2-F	125 3-F	250 4-F	500 5-F
Scheduled Sacri Animal Found De Comatose Decreased Activ Hunched Posture Labored Breathi Rough Coat Blue Feet Hunched Posture Hunched Posture Hunched Posture Oecreased Activ Decreased Activ Decreased Activ Decreased Activ Rough Coat #1 Rough Coat #2 Rough Coat #3 Blue Feet #2 Blue Feet #3 Lethargic #1 Lethargic #1 Lethargic #3 Labored Breathi Labored Breathi Comatose #1 Comatose #1 Comatose #3	#1 #2 #3 ity #1 ity #2 ity #3 ity #3 ity #3 mg #1 mg #2 mg #3	500050520551144555555441000000	5004505004510255555453000000	05100111000000555555000055555555555555	0500000000000055445544000055445544	05 00 00 00 01 11 00 00 52 22 52 21 00 04 22 42 24
Total Number of A	nimals	5	5	5	5	5

Table 5.1

5	3	T

			SUM	MARY OF	BODY WEI	GHTS (Gram	s)		
	SI	UDY: 10	4P024		S	EX: MALE	3		
PERIOD	DOSE: (mg/ GROUP:	kg) 10 1-M	15 2-M	20 3-M	25 4-M	35 5-м	50 6- M	110 7-M	250 8-M
DAY -3	MEAN S.D. N	280.2 14.27 5	274.7 12.51 5	280.5 17.45 5	278.8 12.47 5	280.4 14.49 5	279.2 10.78 5		 0
DAY 0	MEAN S.D. N	275.2 17.50 5	273.8 9.48 5	279.7 19.86 5	278.6 13.18 5	280.5 13.05 5	277.9 12.69 5	0	0
DAY 7	MEAN S.D. N	334.1 30.21 5	328.4 26.41 5	0	0	0	0	0	 0
DAY 14	MEAN S.D. N	367.6 53.32 5	392.2 57.23 5	0	 0	0	0		 0

^{-- =} Data Unavailable

Table 5.1 (Continued)

MEAN S.D. N

MEAN S.D. N

DAY 7

DAY 14

	V = 11		10110	
	SUMMAR	Y OF BODY	WEIGHTS (Grams)	
STUDY:	104P024		SEX: MALE	
	PERIOD	DOSE: (mg/kg) GROUP:	600 9-M	
	DAY -3	MEAN S.D. N	0	
	DAY 0	MEAN S.D.		

Table 5.2

		SUMMARY OF	BODY	WEIGHTS	G(Grams)
STUDY	: 104PO4	A		SEX:	MALE
	PERIOD	DOSE: (mg/kg) GROUP:	16.5 1-M	18.0 2-H	
	DAY -2	MEAN S.D. N	359.8 21.80 5	363.7 27.93 5	
	DAY 0	MEAN S.D. N	339.3 18.10 5	341.0 26.98 5	
	DAY 7	MEAN S.D. N	335.7 14.35 2	390.8 0.00 1	
	DAY 14	MEAN S.D. N	386.3 13.93 2	438.4 0.00 1	

Table 5.3

ACUTE INTRAPERITONEAL TOXICITY



		SUMM	ARY OF BO	DY WEIGH	HTS (Grams)		
	STUDY: 104IP2	4		SEX	K: MALE		
PERIOD	DOSE: (mg/kg) GROUP:	20 1-M	50 2-M	110 3-M	250 4-M	600 5-M	
DAY -3	MEAN S.D. N	278.7 12.77 5	280.7 13.85 5	278.7 12.63 5	278.6 13.94 5	277.9 12.59 5	
DAY 0	MEAN S.D. N	305.9 15.01 5	303.4 14.69 5	301.6 13.12 5	300.9 17.13 5	304.1 14.94 5	
DAY 7	MEAN S.D. N	291.8 0.00 1		 0	298.4 0.00 1	0	
DAY 14	MEAN S.D.	352.8 0.00			348.2 0.00		

Table 5.4

ACUTE INTRAPERITONEAL TOXICITY STUDY OF WR242511 IN RATS

							23 2 3	
		SUMI	MARY OF	BODY WE	EIGHTS (Grams)		
S	TUDY: 10	4IP4A			SEX: M	ALE		
PER		OSE: (mg/kg) ROUP:	5 1-M	10 2-M	16.5 3-M	30 4-M		
DAY	-			362.9 22.77 5	365.9 25.40 5	362.8 24.75 5		
DAY				371.8 21.41 5	374.3 28.99 5	366.8 25.77 5	p.	
DAY				410.5 25.13 5	369.9 20.31 5	390.7 9.47 2		
DAY				445.9 20.50 5	407.1 31.69 4	445.5 4.17 2		

Table 5.5

						ח רש ר	<u>u</u>	
		SUMMAR	Y OF B	ODY WEIGHT	S (Grams)			
	STUDY: 104P02	5		SEX:	MALE			
PERIOD	DOSE: (mg/kg) GROUP:	550 1-M	700 2-M	900 3-M	1150 4-M	1500 5-พ		
DAY -4		281.5 12.82 5	276.0 16.04 5	279.9 10.46 5	281.2 14.22 5	279.9 17.95 5		
DAY 0	MEAN S.D. N	288.2 9.57 5	283.2 20.28 5	286.1 24.18 5	289.6 15.95 5	287.8 19.75 5		
DAY 7		319.5 16.86 3	307.9 26.48 3	278.7 0.00 1	270.1 5.73 2	0		
DAY 14		388.5 16.60	375.6 32.25	392.6 0.00	355.1 21.07	••		

Table 5.6

ACUTE ORAL TOXICITY STUDY OF WR269410 IN RATS

		WR20	594IU II	N RATS		AF	7	
•••••••		SUMMARY	OF BOD	Y WEIGHT	S (Grams)			
	STUDY: 104PC)6A		SEX:	MALE			
	PER I OD	DOSE: (mg/kg) GROUP:	150 1-M	230 2-M	350 3-M			
	DAY -2	MEAN S.D. N	·- 0	363.1 17.88 5	353.7 26.19 5			
	DAY 7	MEAN S.D. N		356.9 48.99	412.5 0.00			

426.2 43.61 3 468.1 0.00 1

MEAN S.D. N

DAY 14

Table 5.7

OF WR269410 IN RATS	DA		ß	

		SUMMARY	OF	BODY WEIGH	rs (Grams)	
********************	STUDY: 104PC	6B	•••••	SEX	MALE	
	PERIOD	DOSE: (mg/kg) GROUP:	40 1-и	80 2-M	150 3-M	
	DAY -3	MEAN	185.2		186.2	
		S.D. N	8.99	12.09	9.69	
		N	2	,	,	
	DAY 0	MEAN	196.8	200.1	194.6	
		S.D.	8.17	14.75	8.34	
		N	5	5	5	
	DAY 7	MEAN	277.5	269.6	268.0	
	DAI	S.D.	7.47	13.63	6.50	
		N	5	5	5	
	DAY 14	MEAN	348.8	335.0	329.3	

Table 5.8

ACUTE INTRAPERITONEAL STUDY
OF WR269410 IN RATS

*******		SUMMA	RY OF B	ODY WEIGH	TS (Grams)		
	STUDY: 104IP2	6	• • • • • • • • • •	SEX	: MALE		
PERIOD	DOSE: (mg/kg) GROUP:	30 1-M	60 2-M	125 3-M	250 4-M	500 5- M	
DAY -3	MEAN S.D. N	256.4 14.25 5	258.4 15.65 5	256.8 11.24 5	253.3 15.38 5	257.9 11.13 5	
DAY 0	MEAN S.D. N	275.9 13.95 5	276.9 15.63 5	277.1 13.42 5	271.2 13.15 5	275.8 9.18 5	
DAY 7	MEAN S.D. N	311.6 23.54 5	302.9 18.18 5	321.9 32.46 2	306.0 12.80 2	316.3 0.00 1	
DAY 14	MEAN S.D. N	362.7 34.47 5	351.5 23.38 5	363.1 35.78 2	360.2 23.41 2	381.5 0.00 1	

Table 6.1

ACUTE ORAL TOXICITY STUDY

OF WR242511 IN RATS				F		
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			SUMI	MARY OF	WEIGHT	GAINS (Grams)			
•••••	S	TUDY: 10	4P024			SEX: MALE		•••••	******
PERIOD	DOSE: (mg GROUP:	g/kg) 10 1-M	15 2-M	20 3-M	25 4-M	35 5-M	50 6-M	110 7- M	250 8-M
DAY 7	MEAN S.D. N	58.9 14.74 5	54.6 21.66 5	 0			 0		
DAY 14	MEAN S.D. N	33.5 26.50 5	63.8 40.23 5	0		0	0	0	0
TOTAL GAIN	MEAN S.D. N	92.4 40.69 5	118.4 52.80 5		 0	0	0	0	0

^{-- =} Data Unavailable

Table 6.1 (Continued) ACUTE ORAL TOXICITY STUDY OF WR242511 IN RATS

	D		17	53
[1]	In	101	17	

	SUMMAR	Y OF WEIGH	IT GAIN	S (Grams)
STUDY	7: 104P024		SEX:	MALE
	PERIOD	DOSE: (mg/kg) GROUP:	600 9-M	
	DAY 7	MEAN S.D. N	0	
	DAY 14	MEAN S.D. N	0	·
	TOTAL GAIN	MEAN S.D. N	0	

Table 6.2

 		CINOUNDU OF	WELGIN	CATN	• • • • • • • • • • • • • • • • • • • •
		SUMMARY OF	WEIGHT	GAIN	(Grams)
STUDY:	104P04A			SEX:	MALE
	PERIOD	DOSE: (mg/kg) GROUP:	16.5 1-M	18.0 2-M	
	DAY 7	MEAN S.D. N	13.8 7.71 2	52.5 0.00 1	
	DAY 14	MEAN S.D. N	50.6 0.42 2	47.6 0.00 1	
	TOTAL GAIN	MEAN S.D. N	64.4 7.28 2	100.1 0.00 1	

			Table 6.3					
	AC	UTE IN	TRAPERITO OF WR242	NEAL TO	XICITY RATS		= -	
							15	
	• • • • • • • • • • • • • • • • • • • •	SUMMA	RY OF WEI	GHT GAI	NS (Grams)			
STU	4		SEX	: MALE				
PERIOD	DOSE: (mg/kg) GROUP:	20 1-M	50 2- M	110 3-M	250 4-M	600 5-M		
DAY 7	MEAN	-36.9	••	••	-10.7			
	N.	1	0	0	1	0		
DAY 14	MEAN	61.0	••		49.8			
	N.	1	0	0	1	0		
TOTAL GAIN	MEAN	24.1			39.1			
	S.D. N	1	0	0	0.00	0		
	PERIOD DAY 7 DAY 14	STUDY: 104IP2 DOSE: (mg/kg) PERIOD GROUP: DAY 7 MEAN S.D. N DAY 14 MEAN S.D. N	SUMMA STUDY: 104IP24 DOSE: (mg/kg) 20 PERIOD GROUP: 1-M DAY 7 MEAN -36.9 S.D. 0.00 N 1 DAY 14 MEAN 61.0 S.D. 0.00 N 1 TOTAL GAIN MEAN 24.1	ACUTE INTRAPERITO STUDY OF WR242 SUMMARY OF WEI STUDY: 104IP24 DOSE: (mg/kg) 20 50 PERIOD GROUP: 1-M 2-M DAY 7 MEAN -36.9 S.D. 0.00 N 1 0 DAY 14 MEAN 61.0 S.D. 0.00 N 1 0 TOTAL GAIN MEAN 24.1 S.D. 0.00 S.D. 0.00	ACUTE INTRAPERITONEAL TO STUDY OF WR242511 IN SUMMARY OF WEIGHT GAI STUDY: 104IP24 SEX DOSE: (mg/kg) 20 50 110 PERIOD GROUP: 1-M 2-M 3-M DAY 7 MEAN -36.9 N 1 0 0 DAY 14 MEAN 61.0 S.D. 0.00 N 1 0 0 TOTAL GAIN MEAN 24.1 S.D. 0.00	ACUTE INTRAPERITONEAL TOXICITY STUDY OF WR242511 IN RATS SUMMARY OF WEIGHT GAINS (Grams) STUDY: 104IP24 SEX: MALE DOSE: (mg/kg) 20 50 110 250 GROUP: 1-H 2-H 3-H 4-H DAY 7 MEAN -36.9 10.7 S.D. 0.00 0.00 N 1 0 0 1 DAY 14 MEAN 61.0 49.8 S.D. 0.00 N 1 0 0 1 TOTAL GAIN MEAN 24.1 39.1 S.D. 0.00 S.D.	ACUTE INTRAPERITONEAL TOXICITY STUDY OF WR242511 IN RATS SUMMARY OF WEIGHT GAINS (Grams) STUDY: 104IP24 SEX: MALE DOSE: (mg/kg) 20 50 110 250 600 PERIOD GROUP: 1-M 2-M 3-M 4-M 5-M DAY 7 MEAN -36.9 10.7 8.D. 0.00 0.00 10.7 S.D. 0.00 0.00 0.00 10.7 DAY 14 MEAN 61.0 49.8 10.7 S.D. 0.00 49.8 10.7 S.D. 0.00 39.1 10.7 S.D. 0.00 39.1 39.1 5.D. 0.00 10.	ACUTE INTRAPERITONEAL TOXICITY STUDY OF WR242511 IN RATS SUMMARY OF WEIGHT GAINS (Grams) STUDY: 104IP24 SEX: MALE DOSE: (mg/kg) 20 50 110 250 600 PERIOD GROUP: 1-H 2-H 3-H 4-H 5-H DAY 7 MEAN -36.9 10.7 S.D. 0.00 0.00 N 1 0 0 1 0 DAY 14 MEAN 61.0 49.8 S.D. 0.00 49.8 S.D. 0.00 0.00 N 1 0 0 1 0 TOTAL GAIN MEAN 24.1 39.1 S.D. 0.00 0.00

Table 6.4

ACUTE INTRAPERITONEAL TOXICITY STUDY OF WR242511 IN RATS

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	SUM	MARY	OF WEIGHT	GAIN	S (Grams)	
STUDY:	104IP4A			SEX:	MALE	
PERIOD	DOSE: (mg/kg) GROUP:	5 1-M	10 2-M	16.5 3-M	30 4-M	
DAY 7	MEAN S.D. N	36.4 7.76 5	38.8 4.99 5	-4.4 36.70 5	-0.6 5.52 2	
DAY 14	MEAN S.D. N	39.0 8.81 5	35.4 7.86 5	37.0 13.76 4	54.8 5.30 2	
TOTAL GAIN	MEAN S.D. N	75.4 13.73 5	74.1 5.56 5	44.1 42.11 4	54.2 0.21 2	

Table 6.5

ACUTE ORAL TOXICITY STUDY
OF WR269410 IN RATS

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	N	127	[]	

		SUMMARY	OF	WEIGHT G	GAINS (Grams)		
	STUDY: 104P02	6		S	EX: MALE		
PERIOD	DOSE: (mg/kg) GROUP:	550 1-M	700 2-M		1150 4- m	1500 5-M	
DAY 7	MEAN S.D. N	30.0 6.19 3	25.7 2.27 3		-12.0 15.20 2		
DAY 14	MEAN S.D. N	69.0 1.46 3	67.7 5.80 3		85.1 15.34 2	0	
TOTAL G	AIN MEAN S.D. N	99.0 7.07 3	93.4 5.88 3		73.1 0.14 2		

Table 6.6

		SUMMARY	OF V	EIGHT GAIL	NS (Grams)	
S	TUDY: 104PC	6A		SEX	MALE	
	PERIOD	DOSE: (mg/kg) GROUP:	150 1-M	230 2- M	350 3-M	
	DAY 7	MEAN S.D. N	 0	10.4 29.40 3	48.0 0.00 1	
	DAY 14	MEAN S.D. N	 0	69.3 7.30 3	55.6 0.00 1	
	TOTAL GAIN	MEAN S.D. N	 0	79.7 22.56 3	103.6 0.00 1	

Table 6.7

	A	OF WR269	410 ÎN R	ATS DI	AB	
		www.pv.on	······································			-
	S:	UMMARY OF	WEIGHT	GAINS (Grams)	
STUDY	: 104PO6B			SEX: MALE		
PER	DOSE RIOD GROU	: (mg/kg) 40 P: 1-M				
DAY	7 MEA S.D N					
DAY	14 MEA S.D N					
тот	TAL GAIN MEA S.D N					

Table 6.8

ACUTE INTRAPERITONEAL STUDY OF WR269410 IN RATS

			OF WR	269410 1	N RATS		AF	
			SUMMARY	OF WEIG	HT GAINS	(Grams)		
	STUDY	: 104IP26	5		SEX:	MALE		
PE		DOSE: (mg/kg) GROUP:	30 1-M	60 2-M	125 3-м	250 4-M	500 5-M	
DA	AY 7	MEAN S.D. N	35.7 18.73 5	26.1 9.81 5	39.9 15.63 2	45.7 0.71 2	39.7 0.00 1	
DA	AY 14	MEAN S.D. N	51.1 15.25 5	48.6 8.37 5	41.3 3.32 2	54.2 10.61 2	65.2 0.00 1	
тс	OTAL GAIN	MEAN S.D. N	86.8 27.68 5	74.7 14.62 5	81.1 18.95 2	99.9 9.90 2	104.9 0.00 1	

Table 7.1

ACUTE ORAL TOXICITY STUDY OF WR242511 IN RATS

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			SUM	MARY OF	BODY WEI	GHTS (Gran	ns)		
	STUD	Y: 104	P024		S	EX: FEM	ALE		•••••
PERIOD	DOSE: (mg/kg) GROUP:	10 1-F	15 2-F	20 3-F	25 4-F	35 5-F	50 6-F	110 7-F	250 8- F
DAY -3	MEAN S.D. N	0	0	204.4 13.57 5	0		205.0 12.46 5	202.7 13.30 5	204.1 11.29 5
DAY 0	MEAN S.D. N	0	0	198.6 12.12 5	0		200.3 9.78 5	194.9 11.55 5	199.2 9.56 5
DAY 7	MEAN S.D. N	 0	0	225.0 16.48 5	0	0	221.9 15.87 5	189.3 31.21 4	155.7 0.00 1
DAY 14	MEAN S.D. N		0	269.8 50.04 5		0	237.3 21.81 5	239.4 11.15 3	198.4 0.00 1

^{-- =} Data Unavailable

Table 7.1 (continued)

ACUTE ORAL TOXICITY STUDY OF WR242511 IN RATS

0	A	F	57
IN	(0)	17	

SUMMARY OF BODY WEIGHTS (Grams)

STUDY:	104P024	SEX:	FEMALE

PERIOD	DOSE: (mg/kg) GROUP:	600 9-F
DAY -3	MEAN S.D. N	206.6 13.72 5
DAY 0	MEAN S.D. N	202.7 9.43 5
DAY 7	MEAN S.D. N	0
DAY 14	MEAN S.D. N	

-- = Data Unavailable

Table 7.2

ACUTE INTRAPERITONEAL TOXICITY STUDY OF WR242511 IN RATS

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[الما		in	I	

			SUMMARY	OF BODY	WEIGHTS	(Grams)	
	STUDY	104IP24			SEX:	FEMALE	
PERI		OOSE: (mg/kg) GROUP:	20 1-F	50 2-F	110 3-F	250 4- F	600 5-F
DAY	-3			202.8 14.83 5			202.4 10.84 5
DAY	0			212.4 12.61 5			210.7 10.12 5
DAY	7	MEAN S.D.	216.8 2.12 2	0	0	0	0
DAY	14		252.7 15.91 2	0	0	 0	 0

-- = Data Unavailable

Table 7.3

ACUTE INTRAPERITONEAL TOXICITY STUDY OF WR242511 IN RATS

	SUM	MARY O	F BODY	WEIGHTS	(Grams)	
STUDY:	104IP4A			SEX:	FEMALE	
PERIOD	DOSE: (mg/kg) GROUP:	5 1-F	10 2-F	16.5 3-F	30 4-F	
DAY -2	MEAN S.D. N	234.6 23.07 5	235.3 22.76 5	239.9 20.45 5	237.3 19.73 5	
DAY 0	MEAN S.D. N	236.8 21.89 5	233.6 22.76 5	239.9 19.59 5	236.0 20.23 5	
DAY 7	MEAN S.D. N	250.4 17.90 5	251.6 25.14 5	259.6 26.54 5	227.0 14.22 3	
DAY 14	MEAN S.D. N	261.0 17.42 5	266.2 29.18 5	269.5 26.77 5	253.4 5.59 2	

Table 7.4

ACUTE ORAL TOXICITY STUDY OF WR269410 IN RATS

		SUMMARY	OF	BODY	WEIGH'	TS (Grams)		
	STUDY: 104P02	6			SEX	FEMALE		
PERIOD	DOSE: (mg/kg) GROUP:	550 1-F	700 2-F		900 3-F	1150 4-F	1500 5-F	
DAY -4	MEAN S.D. N	198.4 13.78 5	199.4 11.63 5		200.4	202.3 12.91 5	203.2 12.46 5	
DAY 0	MEAN S.D. N	204.3 18.70 5	198.1 14.51 5		199.4 8.29 5	205.1 15.29 5	205.1 14.11 5	
DAY 7	MEAN S.D. N	207.5 0.00 1	200.2		0	208.4 29.77 2	0	
DAY 14	MEAN S.D. N	229.5 0.00 1	232.2 0.00 1		0	251.4 44.19 2		

^{-- =} Data Unavailable

Table 7.5

ACUTE ORAL TOXICITY STUDY OF WR269410 IN RATS

		SUMMARY	OF	BODY	WEIGHTS	(Grams)		
STUDY:	104P06	A			SEX:	FEMALE		
PERI		DOSE: (mg/kg) GROUP:	150 1-F		230 2- F	350 3-F	 	
DAY	-2		240.3 21.01 5			239.2 19.71 5		
DAY	7	MEAN S.D. N	245.8 8.79 3		0	224.2 0.00 1		
DAY	14		267.9 17.75 3		 D	254.0 0.00 1		

-- = Data Unavailable

Table 7.6

ACUTE ORAL TOXICITY STUDY OF WR269410 IN RATS

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					AFT
	SUMMARY	OF	BODY WEIGHT	S (Grams)	
STUDY: 104PO	6B		SEX:	FEMALE	
PERIOD	DOSE: (mg/kg) GROUP:	40 1-F	80 2-F	150 3-F	
DAY -3	MEAN S.D. N	163.2 11.08 5	164.3 9.24 5		
DAY 0	MEAN S.D.	165.9 11.31	170.0 10.80		

201.1 13.54 5

231.8 14.29 5

MEAN S.D. N

MEAN S.D. N 208.2 14.23 5

241.3 16.48 5 0

-- = Data Unavailable

DAY 7

DAY 14

Table 7.7

ACUTE INTRAPERITONEAL STUDY OF WR269410 IN RATS

		SUMMARY	OF	BODY WEIGHTS	(Grams)		
	STUDY: 104IP2	6		SEX:	FEMALE		
PER100	DOSE: (mg/kg) GROUP:	30 1-F	60 2-F		250 4-F	500 5- F	
DAY -3	MEAN S.D. N		200.1 11.71 5		197.6 11.89 5	198.0 10.23 5	
DAY 0	MEAN S.D. N		205.6 13.98 5		205.2 11.55 5	205.4 13.33 5	
DAY 7	MEAN S.D. N		232.3 17.39 5		0	0	
DAY 14	MEAN S.D. N		251.4 19.93 5		0	0	

Table 8.1

ACUTE ORAL TOXICITY STUDY OF WR242511 IN RATS

			0	F WR24253	LI IN RA	rs		FT	
			SUM	MARY OF V	VEIGHT G	AINS (Gran	ns)		
•••••••	STUD	Y: 104	P024	•	S	EX: FEM	ALE		
PERIOD	DOSE: (mg/kg) GROUP:	10 1- F	15 2-F	20 3-F	25 4-F	35 5-F	50 6-F	110 7- F	250 8-F
DAY 7	MEAN S.D.	••		26.4 9.01	••		21.6 7.40	-4.9 26.70	-33.6 0.00
DAY 14	N MEAN	0	0	5 44.9	0	0	15.4	38.9	1 42.7
	S.D. N	0	0	43.95 5	0	0	26.36 5	17.16 3	0.00
TOTAL GAIN	MEAN	••		71.2	• •		37.0 26.19	46.3	9.1

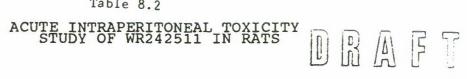
Table 8.1 (Continued)

ACUTE ORAL TOXICITY STUDY OF WR242511 IN RATS

|--|--|

	SUMMAR	Y OF WEIGH	IT GAINS	S (Grams)
STUDY	: 104P024		SEX:	FEMALE
	PERIOD	DOSE: (mg/kg) GROUP:	600 9-F	
	DAY 7	MEAN S.D. N		
	DAY 14	MEAN S.D. N		
	TOTAL GAIN	MEAN S.D. N	0	

Table 8.2



		SUMMA	RY OF WEI	GHT GAI	NS (Grams)		
	STUDY: 104IP2	1		SEX	FEMALE		
PERIOD	DOSE: (mg/kg) GROUP:	20 1-F	50 2-F	110 3-F	250 4 - F	600 5-F	
DAY 7	MEAN S.D.	-5.8 4.74				••	
	N.	2	0	0	0	0	
DAY 14	MEAN S.D.	35.9 13.79	••				
	N.	2	0	0	0	0	
TOTAL GA		30.1 18.53	••				
	N.	2	0	0	0	0	

Table 8.3

ACUTE INTRAPERITONEAL TOXICITY STUDY OF WR242511 IN RATS

					שוו ש	[7]	ij	
	SUM	MARY	OF WEIGHT	GAINS	G (Grams)			
STUDY:	104IP4A			SEX:	FEMALE			
PERIOD	DOSE: (mg/kg) GROUP:	5 1-F	10 2-F	16.5 3-F	30 4-F			
DAY 7	MEAN S.D. N	13.6 5.45 5	18.0 5.64 5	19.6 7.90 5	-8.0 38.56 3			
DAY 14	MEAN S.D. N	10.6 3.33 5	14.5 5.66 5	9.9 3.65 5	18.6 1.27 2			
TOTAL GAIN	MEAN S.D. N	24.2 4.91 5	32.6 8.86 5	29.6 7.60 5	32.3 13.65 2			

Table 8.4

ACUTE ORAL TOXICITY STUDY OF WR269410 IN RATS

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		SUMM	ARY OF WEI	SHT GAI	NS (Grams)		
	STUDY: 104P02	5		SEX	: FEMALE		
PERIOD	DOSE: (mg/kg) GROUP:	550 1-F	700 2-F	900 3-F	1150 4- F	1500 5-F	
DAY 7	MEAN S.D.	16.8	6.1		2.1		-
DAY 14	N MEAN S.D.	22.0	32.0 0.00		43.0 14.42		
TOTAL G	N AIN MEAN S.D. N	38.8 0.00 1	38.1 0.00 1	0 0	45.1 16.69 2	 0	

Table 8.5

ACUTE ORAL TOXICITY STUDY OF WR269410 IN RATS

		SUMMARY	OF	WEIGHT GAINS	S (Grams)
S	TUDY: 104PO	6A		SEX:	FEMALE
	PER100	DOSE: (mg/kg) GROUP:	150 1-F	230 2- F	350 3-F
	DAY 7	MEAN S.D. N	21.4 9.45 3	 0	1.3 0.00 1
	DAY 14	MEAN S.D. N	22.1 9.04 3		29.8 0.00 1
	TOTAL GAIN	MEAN S.D. N	43.5 14.78 3		31.1 0.00 1

Table 8.6

ACUTE ORAL TOXICITY STUDY OF WR269410 IN RATS

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	SUMMARY	OF	WEIGHT GAINS	(Grams)		
 STUDY: 104PC	6B		SEX:	FEMALE		
 PERIOD	DOSE: (mg/kg) GROUP:	40 1-F	80 2-F	150 3-F		
DAY 7	MEAN S.D. N	35.2 6.84 5	38.1 4.67 5	 0		
DAY 14	MEAN S.D. N	30.7 1.85 5	33.2 6.89 5	 0		
TOTAL GAIN	MEAN S.D. N	65.9 6.95 5	71.3 10.10 5	0		

Table 8.7

ACUTE INTRAPERITONEAL STUDY OF WR269410 IN RATS

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1			1	

		SUMM	ARY OF WEI	GHT GAI	NS (Grams)	
	STUDY: 104IP2	5		SEX	: FEMALE	
PERIOD	DOSE: (mg/kg) GROUP:	30 1-F	60 2-F	125 3-F	250 4-F	500 5-F
DAY 7	MEAN	21.4	26.7			
DATE	S.D.	9.98	9.24			
	N	5	5	0	0	0
DAY 14	MEAN	24.9	19.1			
	S.D.	6.28	10.20			
	N	5	5	0	0	0
TOTAL G	AIN MEAN	46.3	45.8			
	S.D.	12.98	6.32			~ ~
	N	5	5	0	0	0

^{-- =} Data Unavailable

Table 9

ACUTE ORAL AND INTRAPERITONEAL TOXICITY STUDY OF WR242511 AND WR269410 IN RATS

Dose-Mortality Data

WR242511 Tartrate - Gavage

	Mo	rtality
Dose Level (mg base/kg)	Males	<u>Females</u>
10	0/5	-
15	0/5	-
16.5	3/5	
18	4/5	-
20	5/5	0/5
25	5/5	-
35	5/5	-
50	5/5	0/5
110	-	2/5
250	-	4/5
600	**	5/5

^{*}number of deaths/number of animals in group.

WR242511 Tartrate - Intraperitoneal

WICE 12311 Table	ie marapernonea:	
	Mo	rtality ^a
Dose Level (mg base/kg)	Males	<u>Females</u>
5	0/5	0/5
10	0/5	0/5
16.5	1/5	0/5
20	4/5	3/5
30	3/5	3/5
50	5/5	5/5
110	5/5	5/5
250	4/5	5/5
600	5/5	5/5

^{*}number of deaths/number of animals in group.

Table 9 (contd.)

ACUTE ORAL AND INTRAPERITONEAL TOXICITY STUDY OF WR242511 AND WR269410 IN RATS Dose-Mortality Data

WR269410 - Gavage

	M	ortality ^a
Dose Level (mg/kg)	Males	<u>Females</u>
40	0/5	0/5
80	0/5	2/5
150	0/5	2/5
230	2/5	5/5
350	4/5	4/5
550	2/5	4/5
700	2/5	4/5
900	4/5	5/5
1150	3/5	3/5
1500	5/5	5/5

*number of deaths/number of animals in group.

WR269410 -Intraperitoneal

	Mortality ^a		
Dose Level (mg base/kg)b	Males	<u>Females</u>	
35 (30)	0/5	0/5	
43 (50)	0/5	0/5	
134 (125)	3/5	5/5	
215 (250)	3/5	5/5	
473 (500)	4/5	5/5	

*number of deaths/number of animals in group bactual (intended) dose level



APPENDIX 1

Analytical Chemistry Methodology and Dosage Formulation Analysis

INITIAL PURITY AND IDENTITY STUDY AND SAMPLES IN 1% METHYLCELLULOSE AND 0.4% TWEEN 80 ANALYSIS OF 8-[(4-AMINO-1-METHYLBUTYL)AMINO]-5-(1-HEXYLOXY-6-METHOXY-4-METHYLQUINOLINE DL-TARTRATE (WR242511). STUDY NO. 104

ANALYSTS:

ADAM NEGRUSZ A.KARL LARSEN, JR.

STUDY SITE:

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CHICAGO, ILLINOIS 60612

REPORT PREPARED:

JULY 12, 1993

APPROVED:

JULY 12, 1993

DR. EUGENE F. WOODS, Ph.D.

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OBJECTIVE

The objective of this study was to confirm the initial identity, establish the purity of WR242511 and to develop the analytical method for dosage formulation analysis.

WR242511 samples were submitted for analysis May 26, 1993 and June 3, 1993. Results are found on pages 9 and 10.

In low concentration WR242511 is stable for 48 hours (<10% loss). In high concentration drug is stable during two weeks period of time. This will be reported with the longer term toxicological studies.

EXPERIMENTAL

The subject sample - WR242511 was supplied by the Toxicology Research Laboratory and stored at -20⁰C when it was not analyzed.

Description

A fine yellow powder, no obvious odor.

Spectrum

An ultraviolet spectrum (Figure I) recorded on a Shimadzu Spectronic 200 UV spectrometer (dual beam), was obtained from 20 ug/ml solution of WR242511 prepared in mobile phase. The sample was found with maximal absorptivity observed at 212 nm and 264 nm.

ANALYTICAL METHOD

Reagents

Subject sample (WR242511) was supplied by Toxicology Research Laboratory. HPLC grade methanol, acetonitrile, ammonium formate and formic acid were purchased from Fisher Scientific. HPLC grade water was supplied through a Millipore, MILLI-Q Reagent Water System which was fed with distilled water.

Standards

All WR242511 concentrations reflect free base value. A 0.71 mg base/ml WR242511 stock solution was prepared by weighing 100 mg of DL-tartrate salt (mole fraction = 0.71) into 100 ml volumetric flask. The content was dissolved in and the volume brought to mark with mobile phase. Calibration standard solutions were prepared in mobile phase using 0.71 mg base/ml WR242511 stock solution as follows.

Volume Flask Final	
Transferred (ml) Volume (ml) Concentration	(ug base/ml)
1.0 100 7.1	
2.0 100 14.2	
4.0 100 28.4	
6.0 100 42.6	
8.0 100 56.8	
10.0 100 71.0	

Aliquots of 0.5 ml from each calibration standard solution were transferred to individually labelled crimp-top vials, sealed and stored at -20°C until analyzed.

Controls

Control A (0.639 mg base/ml), control B (2.84 mg base/ml) and control C (7.81 mg base/ml) were prepared by weighing 90 mg, 400 mg and 1100 mg respectively of WR242511 DL-tartrate salt into three 100 ml volumetric flasks, dissolved in and diluted to mark with mobile phase. Aliquots of 1.5 ml of each control were transferred to individually labelled screw-capped vials, sealed and stored at -20⁰C until analyzed.

Analytical Procedure

One set of WR242511 calibration standards and three vials of each stock control solutions were removed from a -20°C freezer to warm up prior to samples analysis. Working control solutions were prepared as follows. Control A - 1 ml of stock solution was transferred to a 25 ml volumetric flask and diluted to mark with mobile phase. Control B - 1 ml of stock solution was transferred to a 25 ml volumetric flask and diluted to mark with mobile phase. Five ml were then transferred to another 25 ml volumetric flask and diluted to mark with mobile phase. Control C was prepared the same way as control B. The standard curve was run at the beginning and at the end of the day. Controls were analyzed in a random order.

HPLC System

See PURITY section, WR242511 was monitored at 230 nm.

Calculations

A standard curve was run at the beginning and the end of the day. Final concentration for controls and samples were determined using a composite standard curve. The composite standard curve was determined by linear least squared regression analysis of the peak areas for WR242511 as a function of concentration. WR242511 concentrations (mg base/ml) for controls and samples were determined using the following equation:

WR242511 conc. = $(Y-B)/M \times (d.f./1000)$

Y - peak area

B - Y-intercept from regression analysis of composite standard curve

M - slope from regression analysis

d.f. - dilution factor

PURITY

HPLC System

Solvent Delivery System: Perkin-Elmer Series 3B Pump

Injector: Rheodyne 7125 with 50 ul sample loop

Analytical Column: Spherisorb CN 5u, 250 mm x 4.6 mm (Alltech)

Detector: Perkin-Elmer LC-55B UV Detector, 225 nm, 264 nm

Integrator: Spectra-Physics SP4270 Integrator

Mobile Phase:

20% methanol, 50% acetonitrile, 30% 0.01 M ammonium formate (in water), Ph 3.0 (adjusted with 88% formic acid), flow 1.5

ml/minute

Procedure

Six solutions of WR242511 were prepared as follows. Twenty five mg of WR242511 sample was weighed into a 25 ml volumetric flask. The sample was dissolved in and the volume brought to mark with mobile phase. A 50 ul aliquot of each solution was immediately chromatographed at 225 nm and next at 264 nm.

Calculation of Results

Quantitations were based on the assumption of equal detector response per unit weight of all UV-absorbing components. Areas of WR242511 and other detectable components in the subject sample chromatograms were employed in the following equation to calculate the percentage of WR242511 present in the sample:

%PURITY = (area of WR242511/total area) x 100

Results

Typical chromatogram is shown in Figure II. The subject sample was found to contain less than 1% of one UV-absorbing impurity (225 nm). At 264 nm no visible impurities were observed. Percent purity of WR242511 was found to be 99.51%, standard deviation - 0.02%. The assay results are presented in Table I

IDENTIFICATION

GC-MS System

Gas Chromatograph:

Hewlett-Packard Series II

Mass Selective Detector:

Hewlett-Packard Model 5970

Analytical Column:

30 m x 0.25 mm ID, DB-5 with a 3 micron film thickness.

GC Parameters:

injector temp. 250°C, oven temp. 70°C initial, 280°C final, 15°C/minute ramp, carrier gas - helium, flow rate 2 ml/minute,

split ratio 10:1

Procedure

Subject sample (WR242511) was submitted from the Toxicology Research Laboratory. The sample was dissolved in methanol to a concentration of 0.71 ug base/ml and a 2 ul aliquot was injected on the column. The MSD scanned from 40 amu to 400 amu at rate of 1 scan per second.

Results - GC-MS

The mass spectrum indicates a molecular ion m/e 373 which is in agreement with the WR242511 molecular weight. Major fragments of WR242511 sample are m/e 84, 175, 203, 288.

Figure III shows the mass spectrum of the initial WR242511 sample.

FIGURE I

ULTRAVIOLET SPECTRUM OF WR242511

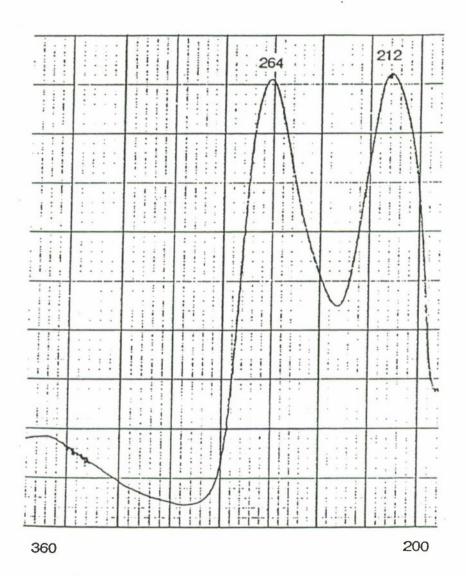


FIGURE II

CHROMATOGRAM OF WR242511 SAMPLE (CONCENTRATION 0.71 MG BASE/ML, 225 NM)

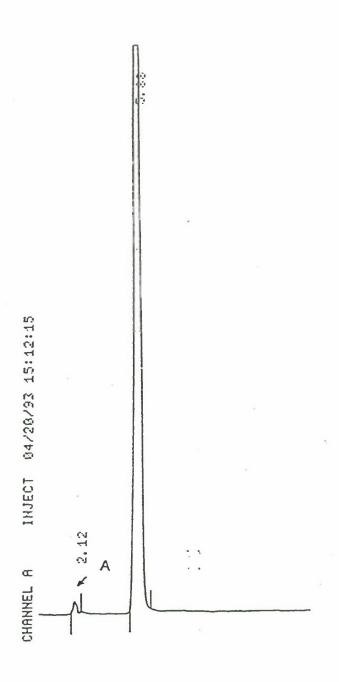


FIGURE III

MASS SPECTRUM OF INITIAL WR242511 SAMPLE

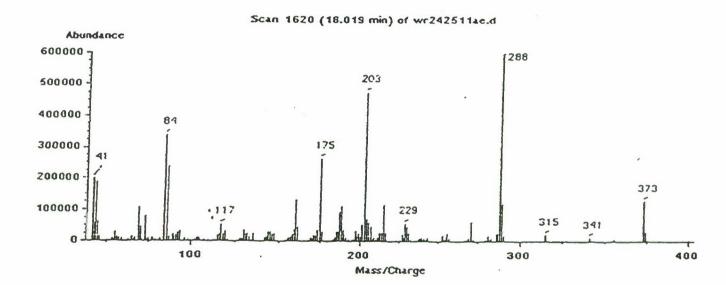




TABLE I

PURITY DATA FOR WR242511 PRIOR TO INITIATING STUDY NO. 104

Solutions

Peak Identity	1	2	3	4	5	6
Α	4370	4354	4307	4414	3925	4509
WR242511	871097	863423	869317	869227	872867	862653
% Purity	99.501	99.498	99.507	99.495	99.552	99.480

Mean \pm S.D. - 99.505 \pm 0.024

MEMO

DATE:

May 26, 1993

TO:

Dr. Barry S. Levine

FROM:

Adam Negrusz

Forensic Toxicology Laboratory

College of Pharmacy

RE:

WR242511 samples submitted for analysis May 26, 1993.

WR242511 Concentration (mg base/ml)

Sample Identification	Mean (± SD)
LIGHT GREEN WITH BLUE DOT (2.0)	1.9010 (± 0.0078)
GREEN (3.0)	2.7401 (± 0.0023)
YELLOW (4.0)	3.9661 (± 0.0077)
PINK (5.0)	4.5820 (± 0.0124)
PINK WITH BLUE DOT (7.0)	6.4099 (± 0.0109)
GREEN WITH BLUE DOT (10.0)	9.7111 (± 0.0889)
BROWN (22.0)	21.5021 (± 0.1055)
BLACK WITH WHITE DOT (50.0)	49.5947 (± 0.1897)
BLACK WITH YELLOW DOT (120.0)	123.6744 (± 0.4024)

MEMO

DATE:

June 3, 1993

TO:

Dr. Barry S. Levine

FROM:

Adam Negrusz

Forensic Toxicology Laboratory

College of Pharmacy

RE:

WR242511 samples submitted for analysis June 3, 1993.

WR242511 Concentration (mg base/ml)

Sample Identification	Mean (± SD)
PINK WITH WHITE DOT (6.0)	6.3654 (± 0.0770)
GREEN WITH BLACK DOT (3.6)	3.6226 (± 0.0329)
BLUE WITH BLACK DOT (3.3)	3.2903 (± 0.0241)
LIGHT GREEN (2.0)	1.9403 (± 0.0139)
LEMON YELLOW (1.0)	1.0041 (± 0.0039)

INITIAL PURITY, IDENTITY AND SAMPLES ANALYSIS IN 1% METHYLCELLULOSE AND 0.4% AND 0.2% TWEEN 80 OF p-AMINOHEPTANOPHENONE (WR269410). STUDY NO. 104

ANALYSTS:

ADAM NEGRUSZ

A. KARL LARSEN, JR.

STUDY SITE:

FORENSIC TOXICOLOGY LABORATORY

COLLEGE OF PHARMACY

UNIVERSITY OF ILLINOIS AT CHICAGO

CHICAGO, ILLINOIS 60612

SPONSOR:

TOXICOLOGY RESEARCH LABORATORY

UNIVERSITY OF ILLINOIS AT CHICAGO

CHICAGO, ILLINOIS 60612

REPORT PREPARED:

JULY 12, 1993

APPROVED:

JULY 12, 1993

DR. EUGENE F. WOODS, Ph.D.

OBJECTIVE

The objective of this study was to confirm the initial identity and establish the purity of WR269410 and to develop the analytical method for dosage formulation analysis.

WR269410 samples were submitted for analysis May 25, 27, 1993 and June 3, 22, 1993. Results are found on pages 9, 10 and 11.

In low and in high concentrations WR 269410 is stable for two weeks (<10% loss). This will be reported with the longer term toxicological studies.

EXPERIMENTAL

The subject sample - WR269410 was supplied by the Toxicology Research Laboratory and stored at -20°C when it was not analyzed.

Description

A fine white powder, no obvious odor.

Spectrum

An ultraviolet spectrum (Figure I) recorded on a Shimadzu Spectronic 200 UV spectrometer (dual beam) was obtained from 20 ug/ml solution of WR269410 prepared in mobile phase. The sample was found with maximal absorptivity observed at 230 nm and 312 nm.

ANALYTICAL METHOD

Reagents

Subject sample (WR269410) was supplied by the Toxicology Research Laboratory. HPLC grade methanol, acetonitrile and acetic acid glacial were purchased from Fisher Scientific, 1-heptanosulfonate sodium salt from Regis. HPLC grade water was supplied through a Millipore, MILLI-Q Reagent Water System which was fed with distilled water.

Standards

A 1.0 mg/ml of WR269410 stock solution was prepared by weighing 100 mg of WR269410 into 100 ml volumetric flask. The content was dissolved in and the volume brought to mark with mobile phase. Calibration standards solutions were prepared in mobile phase using 1.0 mg/ml WR269410 stock solution as follows.



Volume	Flask	Final
Transferred (ml)	Volume (ml)	Concentration (µg/ml)
1.0	100	10.0
2.0	100	20.0
4.0	100	40.0
6.0	100	60.0
8.0	100	80.0
10.0	100	100.0

Aliquots of 0.5 ml from each calibration standard solution were transferred to individually labelled crimp-top vials, sealed and stored at -20°C until analyzed.

Controls

Control A (9 mg/ml), control B (50 mg/ml), and control C (110 mg/ml) were prepared by weighing 900 mg, 5000 mg and 11000 mg respectively of WR269410 into three 100 ml volumetric flasks, dissolved in and diluted to mark with mobile phase. Aliquots of 1.5 ml of each control were transferred to individually labelled screw-capped vials, sealed and stored at -20°C until analyzed.

Analytical Procedure

One set of WR269410 calibration standards and three vials of each stock control solutions were removed from a -20°C freezer to warm up prior to samples analysis. Working control solutions were prepared as follows. Control A - 1 ml of stock solution was transferred to a 25 ml volumetric flask and diluted to mark with mobile phase, 5 ml then were then transferred to a 25 ml volumetric flask and diluted to mark with mobile phase. Control B - 1 ml of stock was transferred to a 25 ml volumetric flask and diluted to mark with mobile phase. One milliliter was then transferred to another 25 ml volumetric flask and diluted to mark with mobile phase. Control C - 1 ml of stock solution was transferred to 100 ml volumetric flask and diluted to mark with mobile phase. One milliliter was then transferred to a 25 ml volumetric flask and diluted to mark with mobile phase. The standard curve was run at the beginning and at the end of the day. Controls were analyzed in a random order.

HPLC System

See PURITY section, WR269410 was monitored at 254 nm.

PURITY

DRAFT

HPLC System

Solvent Delivery System:

Perkin-Elmer Series 3B Pump

Injector:

Rheodyne 7125 with 20 ul sample loop

Analytical Column:

uBondapak C18, 300 mm x 3.9 mm (Waters)

Detector:

Kratos Spectroflow 773 UV Detector, 0.010 AUFS, 230nm and

312nm

Integrator:

3380A Hewlett-Packard Integrator

Mobile Phase:

60% of acetonitrile and 40% of 0.01 M heptanosulfonate sodium salt

in 0.1% (v/v) acetic acid (in water), flow 1.5 ml/minute

Procedure

Six solutions of WR269410 were prepared as follows. Twenty five mg of WR269410 sample was weighed into a 25 ml volumetric flask. The sample was dissolved in and the volume brought to mark with mobile phase. A 20 ul aliquot of each solution was immediately chromatographed at 230 nm and next at 312 nm.

Results

Typical chromatograms are shown in Figure II. The initial purity study of WR269410 shows that there are no UV absorbing impurities (230 nm, 312 nm) and from this point of view the substance is 100% pure.

IDENTIFICATION

GC-MS System

Gas Chromatograph:

Hewlett-Packard Series II

Mass Selective Detector:

Hewlett-Packard Model 5970

Analytical Column:

30 m x 0.25 mm ID, DB-1 with a 3 micron film thickness.

GC Parameters:

injector temp. 250°C, oven temp. 70°C initial, 280°C final, 20°C/minute ramp, carrier gas - helium, flow rate 2 ml/minute, split ratio 10:1

Procedure

Subject sample (WR269410) was submitted from the Toxicology Research Laboratory. The sample was dissolved in methanol to a concentration of 1 ug/ml and a 2 ul aliquot was injected on the column. The MSD scanned from 40 amu to 400 amu at a rate of 1 scan per second.

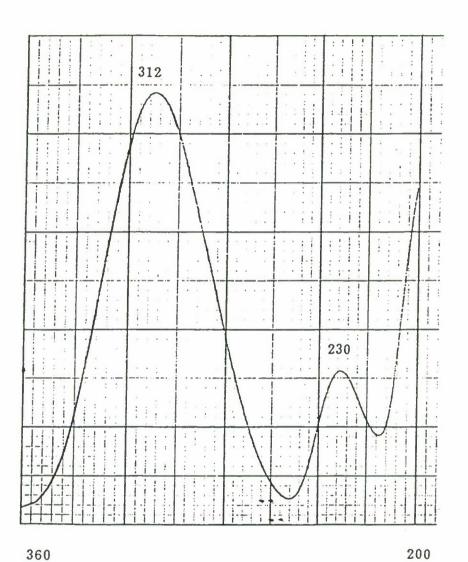
Results - GS-MS

The mass spectrum indicates a molecular ion m/e 205 which is in agreement with the WR269410 molecular weight. Major fragments of the sample are m/e 41, 65, 92, 120, 135, 148.

Figure III shows the mass spectrum of the initial WR269410 sample.



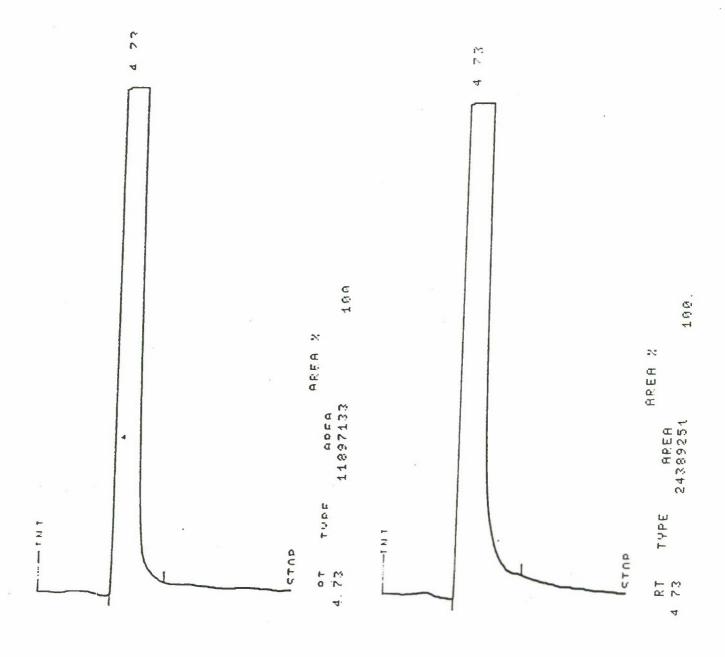
FIGURE I ULTRAVIOLET SPECTRUM OF WR269410



6



CHROMATOGRAMS OF WR269410 AT 230 NM (A) AND 312 NM (B), CONCENTRATION 1 MG/ML

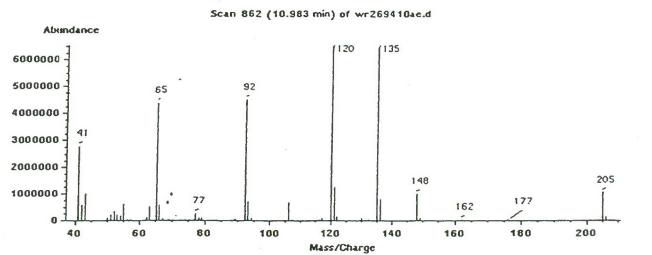


A

B

FIGURE III

MASS SPECTRUM OF INITIAL WR269410 SAMPLE



MEMO

DATE:

May 27, 1993

TO:

Dr. Barry S. Levine

FROM:

Adam Negrusz

Forensic Toxicology Laboratory

College of Pharmacy

RE:

WR269410 samples submitted for analysis May 25, 1993 and May 27, 1993.

WR269410 Concentration (mg/ml)

Sample Identification	Mean (± SD)
LIGHT ORANGE (27.5)	26.6967 (± 0.2284)
LIGHT GREEN, DARK ORANGE (35.0)	34.9143 (± 0.2858)
DARK ORANGE, BROWN (45.0)	47.3398 (± 0.1992)
GREEN, BROWN (57.5)	61.5332 (± 0.1389)
YELLOW, BLACK (75.0)	71.4507 (± 0.2701)

MEMO

DATE:

June 3, 1993

DRAFT

TO:

Dr. Barry S. Levine

FROM:

Adam Negrusz

Forensic Toxicology Laboratory

College of Pharmacy

RE:

WR269410 samples submitted for analysis June 3, 1993.

WR269410 Concentration (mg/ml)

Sample

Identification

Mean (± SD)

DARK GREEN, BLUE (7.5)

 $8.0820 (\pm 0.1122)$

LIGHT ORANGE WITH YELLOW DOT (11.5)

11.4596 (± 0.0310)

BROWN WITH BLACK DOT (17.5)

19.0269 (± 0.1575)

MEMO

DRAFT

DATE:

June 22, 1993

TO:

Dr. Barry S. Levine

FROM:

Adam Negrusz

Forensic Toxicology Laboratory

College of Pharmacy

RE:

WR269410 samples submitted for analysis June 22, 1993.

WR269410 Concentration (mg/ml)

Sample Identification	Mean (± SD)
BROWN, BLACK (2.0)	2.1323 (± 0.0034)
LIGHT ORANGE, BLUE (4.0)	4.3007 (± 0.0601)
GREEN. BLUE (7.5)	7.8245 (+ 0.0264)

APPENDIX 2

Analytical Chemistry Report from Dr. Flanagan (Univ. of Iowa)

Analysis of p-Aminoheptanophenone (WR269410) Solutions in PEG 200 After Toxicological Testing

Douglas R. Flanagan, Ph.D. Siriporn Toongsuwan, B.S. Kirk VanDer Kamp, B.S.

July 21, 1993

Contract No. DAMD 17-92-C-2035

College of Pharmacy University of Iowa Iowa City, IA 52242 (319) 335-8824



Analysis of p-Aminoheptanophenone (WR269410) Solution in PEG 200 After Toxicological Testing

Summary

PEG 200 solutions of WR269410 were analyzed for content after receipt from the University of Illinois (Dr. Barry Levine).

Assay Procedure

- 1. Make fresh standard solution (about 10 μ g/mL) of PAHP in 95% ethanol.
- 2. Dilute PAHP in PEG 200 solutions that were send from UIC with 95% ethanol (dilution factor = 10,000) by diluting 1 mL of the sample to 100 mL and then diluting 1 mL of this solution to 100 mL with 95% ethanol.
- 3. Assay the concentration of the solutions by using the HP 8450 UV spectrophotometer.
- 4. Concentration of the samples were calculated as follow:

sample conc. = (std conc.*Abs_{sample})*10,000/Abs_{std}

Assay Results

The results from the UV assay of PAHP solutions are shown in Tables 1, 2 and 3.

Table 1: UV Assay Data of PAHP Solutions Returned from UIC on 05/21/93; Mouse Study

03/21/33, Mod3c ocudy	
Labeled Conc.(mg/mL)	Experimental Conc. (mg/mL)
20	18.2
24	26.4
28	31.3
34	31.7
40	40.3
55	50.3
65	66.8
75	77.6
87.5	84.2

TABLE 2: UV Assay Data of PAHP Solutions Returned from UIC on 07/08/93; Rat Study

Labeled Conc. (mg/mL)	Experimental Conc. (mg/mL)
6	6.9
12	8.5
25	26.7
50	42.9
100	94.5

TABLE 3: UV Assay Data of PAHP Solutions Returned from UIC on 07/08/93; Mouse Study

0.700/00/ 1.00000	
Labeled Conc. (mg/mL)	Experimental Conc.(mg/mL)
80	73.2

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APPENDIX 3

Individual Clinical Signs

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		INDIVII	DUAL (CLINIC	AL S	IGNS			
 STUDY: 104P02 DAY 0-DAY 14	24	GROUP: DOSE:	1-M 10 (m	g/kg)		SEX:	MALE		
 ANIMAL #	OBSERVATIONS			SEVERITY	FOC	ONSET	DURATION	FREQUENCY	
491	Hunched Postur Normal Normal 1 Normal 2 Rough Coat Rough Coat Scheduled Sacr	e				DAY 3 DAY 8 DAY 0 DAY 0 DAY 1 DAY 0 DAY 14	DAY 4 DAY 9 DAY 0 DAY 0 DAY 13 DAY 0 DAY 14	2 2 1 1 11 11	
492	Normal Normal 1 Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacr	ifice				DAY 8 DAY 0 DAY 1 DAY 0 DAY 0 DAY 14	DAY 8 DAY 0 DAY 13 DAY 0 DAY 0 DAY 14	1 1 12 1	
493	Normal Normal 1 Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacr	ifice				DAY 8 DAY 0 DAY 1 DAY 0 DAY 0 DAY 14	DAY 13 DAY 0 DAY 7 DAY 0 DAY 0 DAY 14	6 1 7 1 1	
494	Normal Normal 1 Normal 2 Rough Coat Rough Coat 3 Scheduled Sacr	ifice				DAY 8 DAY 0 DAY 0 DAY 1 DAY 0 DAY 14	DAY 11 DAY 0 DAY 0 DAY 13 DAY 0 DAY 14	4 1 1 9 1	
495	Normal Normal 1 Normal 2 Rough Coat Rough Coat 3 Scheduled Sacr	ifice				DAY 11 DAY 0 DAY 0 DAY 1 DAY 0 DAY 14	DAY 11 DAY 0 DAY 0 DAY 13 DAY 0 DAY 14	1 1 1 12 1	

DRAFT

		INDIVII	UAL	CLINICA	L S	GNS				
STUDY: 104P02 DAY 0-DAY 14	24	GROUP: DOSE:	2-M 15(m	ıg/kg)		SEX:	MAI	E		
ANIMAL #	OBSERVATIONS			SEVERITY	LOC	ONSET	DUR	TION	FREQUENCY	
496	Normal Normal 1 Normal 2 Rough Coat Rough Coat 3 Scheduled Sacr	ifice				OAY 12 OAY 0 DAY 0 DAY 1 DAY 0 DAY 14	DAY OAY DAY OAY	12 0 0 13	1 1 1 12 1	••••
497	Hunched Postur Normal Normal 1 Normal 2 Rough Coat Rough Coat 3 Scheduled Sacr					DAY 5 DAY 8 DAY 0 DAY 0 DAY 1 DAY 0 DAY 14	DAY DAY DAY DAY DAY DAY DAY	9 0 0 13	1 2 1 1 1 1 1	
498	Hunched Postur Normal Normal 1 Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacr					DAY 5 DAY 8 DAY 0 DAY 1 DAY 0 DAY 0 DAY 14	DAY DAY DAY DAY DAY OAY	8 0 13 0	1 1 1 12 1 1	
499	Hunched Postur Normal Normal 1 Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacr					DAY 4 DAY 8 DAY 0 DAY 1 DAY 0 DAY 0 DAY 14	DAY DAY DAY DAY DAY DAY	8 0 13 0	3 1 1 12 1 1	
500	Hunched Postur Normal Normal 1 Normal 2 Rough Coat Rough Coat 3 Scheduled Sacr					DAY 5 DAY 9 DAY 0 DAY 0 DAY 1 DAY 0 DAY 14	DAY DAY DAY DAY DAY DAY DAY	12 0 0 13	3 3 1 1 10 1	

ACUTE ORAL TOXICITY STUDY



	INDIVII	OUAL CLINICAL	SIGNS		
STUDY: 104P0 DAY 0-DAY 14	24 GROUP: DOSE:	3-M 20(mg/kg)	SEX:	MALE	
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY
501	Decreased Activity Animal Found Dead Normal 1 Normal 2 Rough Coat Rough Coat	1	DAY 2 DAY 2 DAY 0 DAY 0 DAY 1 DAY 0	DAY 0	1 1 1 1 2
502	Animal Found Dead Normal 1 Normal 2 Rough Coat Rough Coat 3		DAY 2 DAY 0 DAY 0 DAY 1 DAY 0	DAY 2 DAY 0 DAY 0 DAY 2 DAY 0	1 1 1 2
503	Animal Found Dead Normal 1 Normal 2 Rough Coat Rough Coat 3		DAY 2 DAY 0 DAY 0 DAY 1 DAY 0	DAY 2 DAY 0 DAY 0 DAY 2 DAY 0	1 1 1 2 1
504	Decreased Activity Animal Found Dead Normal 1 Normal 2 Rough Coat Rough Coat 3	1	DAY 2 DAY 2 DAY 0 DAY 0 DAY 1 DAY 0	DAY 2 DAY 2 DAY 0 DAY 0 DAY 2 DAY 0	1 1 1 1 2
505	Decreased Activity Animal Found Dead Normal 1 Rough Coat Rough Coat 2 Rough Coat 3	1	DAY 2 DAY 2 DAY 0 DAY 1 DAY 0 DAY 0	DAY 2 DAY 2 DAY 0 DAY 2 DAY 0 DAY 0	1 1 1 2 1 1

Severity No.	Description
1	Slight
2	Moderate
3	Severe

DRAFT

	INDIVI	DUAL CLINICA	L SIGNS		••••••	
STUDY: 104P02 DAY 0-DAY 14	GROUP: DOSE:	4-M 25(mg/kg)	SEX:	MALE		
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
511	Animal Found Dead Normal 1 Rough Coat Rough Coat 2 Rough Coat 3		DAY 3 DAY 0 DAY 1 DAY 0 DAY 0	DAY 3 DAY 0 DAY 2 DAY 0 DAY 0	1 1 2 1	
512	Animal Found Dead Normal 1 Normal 2 Rough Coat Rough Coat 3		DAY 3 DAY 0 DAY 0 DAY 1 DAY 0	DAY 3 DAY 0 DAY 0 DAY 2 DAY 0	1 1 1 2 1	
513	Animal Found Dead Normal 1 Normal 2 Rough Coat Rough Coat 3		DAY 3 DAY 0 DAY 0 DAY 1 DAY 0	DAY 3 DAY D DAY 0 DAY 2 DAY 0	1 1 1 2 1	
514	Decreased Activity Animal Found Dead Normal 1 Normal 2 Rough Coat Rough Coat 3	1	DAY 2 DAY 3 DAY D DAY 0 DAY 1 DAY D	DAY 2 DAY 3 DAY D DAY 0 DAY 2 DAY D	1 1 1 1 2	
515	Decreased Activity Animal Found Dead Normal 1 Normal 2 Rough Coat Rough Coat 3	1	DAY 2 DAY 3 DAY 0 DAY D DAY 1 DAY 0	DAY 2 DAY 3 DAY 0 DAY 0 DAY 2 DAY 0	1 1 1 1 2 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



		OUAL CLINICAL S			
STUDY: 104P02 DAY 0-DAY 14	4 GROUP: DOSE:	5-M 35(mg/kg)	SEX:	MALE	
ANIMAL #	OBSERVATIONS	SEVERITY LOC			FREQUENCY
516	Decreased Activity Dark Material Around Nose Animal Found Dead Labored Breathing Lethargic Normal 1 Rough Coat Rough Coat 2 Rough Coat 3	3	DAY 2 DAY 2 DAY 2 DAY 2 DAY 2 DAY 2 DAY 0 DAY 1 DAY 0 DAY 0	DAY 2 DAY 2 DAY 2 DAY 2 DAY 2 DAY 0 DAY 2 DAY 0	1 1 1 1 1 1 2 1
517	Decreased Activity Animal Found Dead Hunched Posture Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3	2	DAY 2 DAY 3 DAY 1 DAY 1 DAY 0 DAY D	DAY 2 DAY 3 DAY 2 DAY 2 DAY 0 DAY 0	1 1 2 2 1 1 1 1
	Decreased Activity Animal Found Dead Normal 1 Rough Coat Rough Coat 1 Rough Coat 3	2	DAY 2 DAY 2 DAY D DAY 1 DAY 0 DAY 0	DAY 2 DAY 2 DAY D DAY 2 DAY 0 DAY 0	1 1 1 2 1
	Decreased Activity Animal Found Dead Hunched Posture Normal 1 Rough Coat Rough Coat 2 Rough Coat 3	2	DAY 2 DAY 4 DAY 2 DAY D DAY 1 DAY 0 DAY D	DAY 3 DAY 4 DAY 3 DAY D DAY 3 DAY 0 DAY 0	2 1 2 1 3 1
	Animal Found Dead Hunched Posture Hunched Posture 3 Normal 1 Rough Coat Rough Coat 2 Rough Coat 3		DAY 3 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0	DAY 3 DAY 2 DAY 0 DAY D DAY 2 DAY 0 DAY 0	1 2 1 1 2 1

Severity No.	Description
1	Slight
2	Moderate
3	Severe

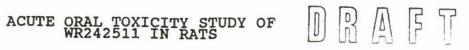


											WW. November Continues	
			INDIVI	DUAL	CLINICA	L S	IGNS	3				
STUDY: DAY 0-D	104P02 AY 14	24	GROUP: DOSE:	6-M 50(m	g/kg)		SEX	(: I	IAN	E		
	ANIMAL #	OBSERVATIONS			SEVERITY		ONSET		DUR	ATION	FREQUENCY	
	521	Ataxia Decreased Acti Animal Found D Hunched Postur Hunched Postur Normal 1 Rough Coat Rough Coat 2 Rough Coat 3	ead e		1		DAY 3 DAY 3 DAY 4 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0		DAY DAY DAY DAY DAY DAY DAY DAY	3 4 3 0 0 3 0	1 1 1 3 1 1 3 1	
	522	Animal Found D Hunched Postur Normal 1 Normal 2 Rough Coat Rough Coat 3					DAY 2 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0		DAY DAY DAY DAY DAY DAY	1 0 0 1	1 1 1 1 1 1 1	
	523	Decreased Acti Animal Found D Hunched Postur Normal 1 Normal 2 Rough Coat Rough Coat 3	ead		1		DAY 2 DAY 2 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0		DAY DAY DAY DAY DAY DAY	2 2 0 0 2	1 1 2 1 1 2	
	524	Decreased Acti Animal Found Do Hunched Posture Hunched Posture Normal 2 Rough Coat Rough Coat 1 Rough Coat 3	ead [*] e		1		DAY 1 DAY 3 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0		DAY DAY DAY DAY DAY DAY DAY	3 2 0 0 2 0	2 1 2 1 1 2 1	
	525	Decreased Activ Animal Found De Hunched Posture	ead		1		DAY 1 DAY 2 DAY 1		DAY DAY DAY	2	2 1 2	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



•••••	INDIVIDUAL CLINI	CAL SIGNS	• • • • • • • • • • • • • • • • • • • •	
STUDY: 104P024 DAY 0-DAY 14	GROUP: 6-M DOSE: 50(mg/kg)	SEX:	MALE	
ANIMAL # OBSERVAT	IONS SEVERITY	LOC ONSET	DURATION FREQUENCY	,
Rough Co Rough Co Rough Co Rough Co	at 1 at 2	DAY 1 DAY 0 DAY 0 DAY 0	DAY 2 2 DAY 0 1 DAY 0 1 DAY 0 1	



			INDIVII	MAT.	CLINICA	T. 8	CNS				
STUDY: DAY 0-D	104P04 AY 14	A	GROUP: DOSE:	1-M 16.5	(mg/kg)						
	ANIMAL #	OBSERVATIONS	••••••		SEVERITY	LOC		DUR		FREQUENCY	
	486	Activity Decre Animal Found D Hunched Postur- Hunched Postur- Rough Coat Rough Coat 1 Rough Coat 2	ead e		1		DAY 3 DAY 4 DAY 1 DAY 0 DAY 1	DAY DAY DAY DAY	4 3 0 3 0	1 1 3 1 3	
		Rough Coat 3					DAY O	DAY		1	
	487	Animal Found Di Hunched Posture Hunched Posture Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3	2				DAY 3 DAY 2 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0	DAY DAY DAY DAY DAY DAY DAY	2 0 0 2 0 0	1 1 1 2 1 1	
		Animal Found Do Hunched Posture Hunched Posture Hunched Posture Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3	2				DAY 3 DAY 2 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0	DAY DAY DAY DAY DAY DAY DAY	2 0 0 2 0 0	1 1 1 1 2 1 1	
		Hunched Posture Hunched Posture Hunched Posture Normal 1 Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacri	2 3				DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 14	DAY DAY DAY DAY DAY DAY DAY	0 0 0 13 0	7 1 1 1 13 1 1	
	490	Hunched Posture					DAY 1	DAY	13	8	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

ACUTE ORAL TOXICITY STUDY OF



	TNDTUTI	DUAL CLINICA	T. S	TCNS			
STUDY: 104P04A DAY 0-DAY 14	GROUP:				MALE	• • • • • • • • • • • • • • • • • • • •	
ANIMAL # OBSERVATIONS		SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
Hunched Postur Normal Normal 1 Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacr				DAY 0 DAY 5 DAY 0 DAY 1 DAY 0 DAY 0 DAY 14	DAY 0 DAY 6 DAY 0 DAY 13 DAY 0 DAY 0 DAY 14	1 2 1 11 1 1	



				UAL CLINICA					
STUDY: DAY 0-1	104P04 DAY 14	A GI	ROUP:	2-M 18.0(mg/kg)		SEX:	MALE		
	ANIMAL #	OBSERVATIONS		SEVERITY	LOC		DURATION		
	481	Activity Decrease Hunched Posture Hunched Posture 2 Hunched Posture 3 Normal Normal 1 Rough Coat Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacrifi		1		DAY 10 DAY 1 DAY 0 DAY 0 DAY 0 DAY 3 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 14	DAY 13 DAY 0 DAY 0 DAY 0 DAY 3 DAY 0 DAY 13 DAY 0 DAY 13 DAY 0 DAY 14	3 6 1 1 1 1 1 1 1 1 1 1	٠,
	482	Activity Decrease Animal Found Dead Hunched Posture Hunched Posture 2 Hunched Posture 3 Normal 1 Rough Coat Rough Coat 2 Rough Coat 3		1		DAY 2 DAY 2 DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0	DAY 2 DAY 2 DAY 2 DAY 0 DAY 0 DAY 0 DAY 2 DAY 0 DAY 0	1 1 2 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	
	483	Activity Decreased Animal Found Dead Hunched Posture Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3		1		DAY 1 DAY 2 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0	DAY 2 DAY 2 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	2 1 1 2 1 1 1 1 1 1	
	484	Animal Found Dead Hunched Posture Hunched Posture 2 Hunched Posture 3 Normal 1 Rough Coat Rough Coat 2 Rough Coat 3				DAY 2 DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0	DAY 2 DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0	1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVII	DUAL CLINICAL	SIGNS			
STUDY: 104P04A DAY 0-DAY 14	GROUP: DOSE:	2-M 18.0(mg/kg)	SEX:	MALE		
ANIMAL # O	BSERVATIONS	SEVERITY I	LOC ONSET	DURATION	FREQUENCY	
H H H N R R	nimal Found Dead unched Posture unched Posture 2 unched Posture 3 ormal 1 ough Coat ough Coat ough Coat 2 ough Coat 3		DAY 3 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0	DAY 3 DAY 2 DAY 0 DAY 0 DAY 0 DAY 2 DAY 0 DAY 0	1 2 1 1 1 2 1	



	TWDTATI	DUAL CLINICAL	SIGNS		
STUDY: 104IP2 DAY 0-DAY 14	24 GROUP: DOSE:	1-M 20(mg/kg)	SEX:	MALE	
	OBSERVATIONS	SEVERITY I			FREQUENCY
			• • • • • • • • • • • • • • • • • • • •		
551	Decreased Activity Decreased Activity 1 Decreased Activity 2 Dark Material Around Nose Animal Found Dead Hunched Posture Hunched Posture 2 Hunched Posture 3 Labored Breathing Lethargic	1 1	DAY 2 DAY 1 DAY 0 DAY 0 DAY 2	DAY 1 DAY 0 DAY 0 DAY 2 DAY 2 DAY 1 DAY 0 DAY 0 DAY 0	1 1 1 1 1 1 1
550	Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3		DAY 2 DAY 1 DAY 0 DAY 0 DAY 0	DAY 2 DAY 2 DAY 0 DAY 0 DAY 0	1 1 1 1
552	Decreased Activity Decreased Activity 1 Decreased Activity 2 Decreased Activity 3 Animal Found Dead Hunched Posture Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3	1 1 1	DAY 1 DAY 0 DAY 0 DAY 0 DAY 2 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 0	DAY 1 DAY 0 DAY 0 DAY 0 DAY 2 DAY 1 DAY 0	1 1 1 1 1 1 1 1 1
553	Decreased Activity Decreased Activity 1 Dark Material Around Eyes Dark Material Around Nose Animal Found Dead Hunched Posture Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3		DAY 2 DAY 0 DAY 3 DAY 2 DAY 3 DAY 1 DAY D DAY 0 DAY 1 DAY 0 DAY 0 DAY 0	DAY 3 DAY 0 DAY 3 DAY 3 DAY 3 DAY 3 DAY 0 DAY 0 DAY 0 DAY 0 DAY D DAY D	2 1 1 2 1 3 1 1 3 1 1 1 1

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVI	OUAL CLINICA	L SIGNS			
STUDY: 104IP DAY 0-DAY 14	24 GROUP: DOSE:	1-M 20(mg/kg)	SEX:	MALE		************
ANIMAL #	OBSERVATIONS	SEVERITY		DURATION		
554	Abdomen Bloated Decreased Activity Decreased Activity Decreased Activity Decreased Activity 1 Decreased Activity 3 Dark Material Around Eyes Dark Material Around Nose Hunched Posture Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1 2 1 1	DAY 2 DAY 4 DAY 3 DAY 0 DAY 0 DAY 3 DAY 2 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1	DAY 13 DAY 4 DAY 7 DAY 0 DAY 0 DAY 3 DAY 3 DAY 13 DAY 0 DAY 0 DAY 0 DAY 0	9 1 2 1 1 1 2 13 1 1 1 1 1 1 1 1	
555	Decreased Activity 1 Decreased Activity 2 Decreased Activity 3 Animal Found Dead Hunched Posture Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3	1 1 1	DAY 0 DAY 0 DAY 0 DAY 2 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	DAY 0 DAY 0 DAY 2 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVI	DUAL CLINICA	L SIGNS			
STUDY: 104 II DAY 0-DAY 14	P24 GROUP: DOSE:	2-M 50(mg/kg)	SEX:	MALE		
ANIMAL	# OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
561	Decreased Activity 1 Decreased Activity 3 Animal Found Dead Hunched Posture Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1	1 1	DAY 0 DAY 0 DAY 1 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0	DAY O DAY O DAY 1 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0	1 1 1 1 1 1 1	
	Rough Coat 2 Rough Coat 3		DAY O	DAY O	1	
562	Blue Feet 2 Decreased Activity Decreased Activity 3 Animal Found Dead Hunched Posture Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3	1 1	DAY D DAY 1 DAY 0 DAY 1 DAY 1 DAY 0 DAY D DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	DAY D DAY 1 DAY 0 DAY 1 DAY 1 DAY 0	1 1 1 1 1 1 1 1 1 1 1	
563	Blue Feet 2 Decreased Activity 1 Decreased Activity 3 Animal Found Dead Hunched Posture 2 Hunched Posture 3 Rough Coat 1 Rough Coat 2 Rough Coat 3	1 1	DAY 0 DAY 0 DAY 1 DAY 0	DAY O DAY D DAY O DAY 1 DAY O DAY D DAY D DAY D DAY D	1 1 1 1 1 1 1 1	
564	Blue Feet 2 Blue Feet 3 Decreased Activity 3 Animal Found Dead	1	DAY O DAY O DAY O DAY 2	DAY O DAY D DAY O DAY 2	1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



***************************************	INDIV	DUAL CLINICA	L SIGNS			
STUDY: 104IP2 DAY 0-DAY 14	GROUP:	2-M 50(mg/kg)	SEX:	MALE		
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
565	Hunched Posture Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Blue Feet 3 Decreased Activity 1 Decreased Activity 3 Animal Found Dead Hunched Posture 2 Hunched Posture 3 Rough Coat 1 Rough Coat 2 Rough Coat 3	1 1	DAY 1 DAY 0 DAY 0 DAY 1 DAY 0	DAY 1 DAY 0 DAY 0 DAY 1 DAY 0	1 1 1 1 1 1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



••••						
	INDIVI	DUAL CLINICA	L SIGNS			
STUDY: 104 IP2 DAY 0-DAY 14	24 GROUP: DOSE:	3-M 110(mg/kg)	SEX:	MALE		
	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
571	Blue Feet 2 Decreased Activity 1 Decreased Activity 2 Decreased Activity 3 Animal Found Dead Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat 1 Rough Coat 2 Rough Coat 3	1 1 3	DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0	DAY O DAY O DAY O OAY O DAY 1 DAY O	1 1 1 1 1 1 1 1 1	
572	Third Clinical Sign Occreased Activity 1 Animal Found Dead Hunched Posture 1 Hunched Posture 2 Rough Coat 1 Rough Coat 2	1	DAY O	DAY ODAY ODAY ODAY ODAY ODAY ODAY ODAY O	1 1 1 1 1 1	
573	Second Clinical Sign Decreased Activity 1 Animal Found Dead Hunched Posture 1 Rough Coat 1	1	DAY O DAY O DAY O DAY O DAY O	DAY O DAY O DAY O DAY O	1 1 1 1	
574	Third Clinical Sign Blue Feet 2 Decreased Activity 1 Decreased Activity 2 Animal Found Dead Hunched Posture 1 Hunched Posture 2 Rough Coat 1 Rough Coat 2	1	DAY O	DAY O	1 1 1 1 1 1 1 1	
575	Second Clinical Sign		DAY 0	DAY 0	1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVI	DUAL CLINICA	L SIGNS			
 STUDY: 104IP24 DAY 0-DAY 14	GROUP: DOSE:	3-M 110(mg/kg)	SEX:	MALE		
ANIMAL # OBSERVAT	ONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
Decrease Animal F Hunched Rough Co		1	DAY O DAY O DAY O DAY O	DAY O DAY O DAY O DAY O	1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



		INDIV	IDUAL CL	INICAL 8	BIGNE	3		
STUDY: DAY 0-D	104IP2 AY 14	GROUP DOSE:	4-M 250(mg	/kg)		: MALE		
	ANIMAL #	OBSERVATIONS	SEVI	RITY LOC	ONSET	DURAT	ION FREQUENCY	
	581	Abdomen Bloated Blue Feet 2 Decreased Activity Decreased Activity Decreased Activity 1 Decreased Activity 2 Decreased Activity 3 Dark Material Around Nos Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Abdomenal Lesion Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 2		1 2 1 1 2 2	DAY 2 DAY 0 DAY 1 DAY 2 DAY 0	DAY 1 DAY 0 DAY 7 DAY 6 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 1 DAY 1 DAY 0 DAY 0	3 7 1 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
		Scheduled Sacrifice Second Clinical Sign		1	DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	4 1 1 1 1	
		Second Clinical Sign Decreased Activity 1 Animal Found Dead Hunched Posture 1 Rough Coat 1		1	DAY O DAY O DAY O DAY O DAY O	DAY O DAY O DAY O	1 1 1	
,		Third Clinical Sign Decreased Activity 1 Animal Found Dead Hunched Posture 1 Hunched Posture 2 Lethargic 2 Rough Coat 1 Rough Coat 2		1	DAY O DAY O DAY O DAY O DAY O DAY O DAY O	DAY O DAY O DAY O DAY O DAY O DAY O	1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



		INDIVI	DUAL CLINICA	L SIGNS			
	STUDY: 104IP24 DAY 0-DAY 14	GROUP: DOSE:	4-M 250(mg/kg)	SEX:	MALE		
	ANIMAL # OBSERVATIONS		SEVERITY	LOC ONSET	DURATION	FREQUENCY	
	585 Second Clinica Animal Found D Hunched Postur Rough Coat 1	ead		DAY 0 DAY 0 DAY 0 DAY 0	DAY O DAY O DAY O DAY O	1 1 1	



				1		
•••••	INDIVID	UAL CLINICAL	SIGNS		••••••	
STUDY: 1041P2 DAY 0-DAY 14	GROUP: DOSE:	5-M 600(mg/kg)	SEX:	MALE	•••••••••	
ANIMAL #	OBSERVATIONS	SEVERITY (LOC ONSET	DURATION	FREQUENCY	
591	Blue Feet 2 Decreased Activity 2 Decreased Activity 3 Animal Found Dead Hunched Posture 2 Hunched Posture 3 Rough Coat 1 Rough Coat 2 Rough Coat 3	1 1	DAY O DAY O DAY O DAY 1 DAY O DAY O DAY O DAY O DAY O DAY O	DAY O DAY O DAY 1 DAY 0	1 1 1 1 1 1 1 1	
592	Third Clinical Sign Blue Feet 2 Decreased Activity 2 Animal Found Dead Hunched Posture 2 Rough Coat 1 Rough Coat 2	1	DAY O DAY O DAY O DAY O DAY O DAY O DAY O	DAY O DAY O DAY O DAY O DAY O DAY O DAY O	1 1 1 1 1 1	
593	Second Clinical Sign Animal Found Dead Rough Coat 1		DAY O DAY O DAY O	DAY O DAY O DAY O	1 1 1	
594	Second Clinical Sign Animal Found Dead Rough Coat 1		DAY O DAY O DAY O	DAY O DAY O DAY O	1 1 1	
595	Blue Feet 2 Decreased Activity 2 Decreased Activity 3 Animal Found Dead Hunched Posture 2 Rough Coat 1 Rough Coat 2 Rough Coat 3	1 3	DAY O DAY O DAY 1 DAY O DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	DAY O DAY O DAY O DAY 1 DAY O DAY O DAY O DAY O DAY O	1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

ACUTE INTRAPERITONEAL TOXICITY STUDY OF DOMESTIC TOXICITY STUDY OF STUDY OF

	INDIVI	DUAL CLINICA	L SIGNS		
STUDY: 104IP DAY 0-DAY 14	4A GROUP: DOSE:	1-M 5(mg/kg)	SEX:	MALE	
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY
476	Hunched Posture Hunched Posture 2 Hunched Posture 3 Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3		DAY 1 DAY 0 DAY 0 DAY 5 DAY 1 DAY 0 DAY 0 DAY 0	DAY 2 DAY 0 DAY 0 DAY 6 DAY 13 DAY 0 DAY 0 DAY 0	2 1 1 2 11 1 1
477	Scheduled Sacrifice Hunched Posture Hunched Posture 3 Normal Normal 1 Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacrifice		DAY 5 DAY 0		11
478	Activity Decreased Hunched Posture 2 Hunched Posture 3 Normal 1 Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1	DAY O DAY O DAY 1 DAY O DAY 0	DAY O DAY O DAY O DAY 13 DAY O	1
479	Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice		DAY O DAY O DAY 4	DAY D DAY 4 DAY 13 DAY 0	1 1 1

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVI	DUAL CLI	ICAL S	IGNS			
STUDY: 104IP4A DAY 0-DAY 14	GROUP: DOSE:	1-M 5(mg/kg)		SEX:	MALE		
ANIMAL # OBSERVATIONS		SEVERI	Y LOC	ONSET	DURATION	FREQUENCY	
480 Hunched Postu Hunched Postu Hunched Postu Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sac	re 2 re 3			DAY 1 DAY 0 DAY 0 DAY 4 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 14	DAY 12 DAY 0 DAY 0 DAY 4 DAY 13 DAY 0 DAY 0 DAY 0 DAY 14	5 1 1 1 12 1 1 1	



		INDIVIDUA	L CLINICA	L SI	GNS	••••••		• • • • • • • • • • • • • • • • • • • •
STUDY: 104 DAY 0-DAY	IP4A 14	GROUP: 2- DOSE: 10	M (mg/kg)		SEX:	MALE		
ANIMA	AL # OBSERVATIONS		SEVERITY	LOC (DNSET	DURATION	FREQUENCY	
466	11 L	e 2 e 3		000000000000000000000000000000000000000	DAY 0 DAY 0 DAY 5 DAY 1	DAY 6 DAY 13 DAY 0 DAY 0	1	
467	Activity Decre Hunched Posture Hunched Posture Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacr	e e 2 e 3	1		DAY 9 DAY 1 DAY 0 DAY 5 DAY 1 DAY 0	DAY 9 DAY 13 DAY 0 DAY 0 DAY 0 DAY 6 DAY 13 DAY 0 DAY 0 DAY 0 DAY 14	1 5 1 1 2 11 1 1	
468	Hunched Posture Hunched Posture Hunched Posture Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacri	1 2 2 3		000000000000000000000000000000000000000	AY 1 AY 0 AY 0 AY 0 AY 4 AY 1 AY 0 AY D AY D AY 14	DAY 11 DAY 0 DAY 0 DAY 0 DAY 6 DAY 13 DAY 0 DAY D DAY D DAY D	4 1 1 3 1D 1 1 1	
469	Activity Decrea Hunched Posture Hunched Posture	•	1	D	AY 1 AY 1 AY D	DAY 2 DAY 11 DAY D	2 4 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

ACUTE INTRAPERITONEAL TOXICITY STUDY OF



	INDIVI	DUAL CLINICA	L S	IGNS			
STUDY: 104IP4 DAY 0-DAY 14	GROUP:	2-M 10(mg/kg)		SEX:	MALE		
ANIMAL #	OBSERVATIONS	SĘVERITY	LOC	ONSET	DURATION	FREQUENCY	
470	Hunched Posture 2 Hunched Posture 3 Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice Abdomen Bloated Activity Decreased Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1		DAY 0 DAY 5 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 14 DAY 2 DAY 1 DAY 0 DAY 1	DAY 0 DAY 0 DAY 6 DAY 13 DAY 0 DAY 0 DAY 0 DAY 14 DAY 2 DAY 13 DAY 11 DAY 0 DAY 13	1 1 2 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVIDUAL C	LINICAL SIGN	S	
STUDY: 104IP4A DAY 0-DAY 14	GROUP: 3-M DOSE: 16.5(mg/kg)	X: MALE	
ANIMAL # OBSE	ERVATIONS S	EVERITY LOC ONSE	T DURATION	
Acti Hunc Hunc Hunc Norm Roug Roug Roug Roug	omen Bloated ivity Decreased ched Posture ched Posture 1 ched Posture 2 ched Posture 3 mal gh Coat gh Coat 1 gh Coat 2 gh Coat 3 eduled Sacrifice	1 DAY	1 DAY 2 10 DAY 13 1 DAY 13 0 DAY 0 0 DAY 0 0 DAY 0 5 DAY 6 1 DAY 13 0 DAY 0	2 4 6 1 1 1 2 11 1 1
457 Abdo Acti Dark Hunc Hunc Roug Roug Roug Roug	omen Bloated	DAY DAY DAY DAY DAY DAY DAY DAY	1 DAY 2 10 DAY 13 1 DAY 1 1 DAY 13 0 DAY 0 0 DAY 0 0 DAY 0 1 DAY 13 0 DAY 0	1 2 4 1 6 1 1 1 13 1 1
458 Abdo Acti Dark Hunc Hunc Rougi Rougi Rougi	omen Bloated vity Decreased c Material Around Nose ched Posture ched Posture 2 ched Posture 3 ched Posture 4 ched Posture 4 ched Posture 4 ched Posture 5 ched Posture 5 ched Posture 5 ched Posture 6 ched Posture 6 ched Posture 7 ched Posture 7 ched Posture 7 ched Posture 7 ched Posture 8 ched Posture 9 ch	DAY	1 DAY 9 10 DAY 13 1 DAY 1 1 DAY 13 0 DAY 0 0 DAY 0 0 DAY 0 1 DAY 13 0 DAY 0	9 4 1 13 1 1 1 1 13 1 1 1 1 1 1 1 1

Severity No.	Description
1	Slight
2	Moderate
3	Severe



							C, D	
	INDIVI	DUAL CLINICA	L S	IGNS				
STUDY: 104IP4 DAY 0-DAY 14	GROUP: DOSE:	3-M 16.5(mg/kg)		SEX:	MALE			
ANIMAL #	OBSERVATIONS	SEVERITY	LOC	ONSET	DURATION	FREQUENCY		
459	Abdomen Bloated Activity Decreased Dark Material Around Nose Hunched Posture Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1		DAY 1 DAY 2 DAY 1 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1		9 3 1 13 1 1 1 13 1 1 1 1		
460	Abdomen Bloated Activity Decreased Dark Material Around Nose Animal Found Dead Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 2	1		DAY 1 DAY 2 DAY 1 DAY 9 DAY 1 DAY 0	DAY 8 DAY 2 DAY 1 DAY 9 DAY 8 DAY 0	8 1 1 8 1 1 8 1 1		

Severity No.	Description
1	Slight
2	Moderate
3	Severe



		DUAL CLINICA	AL SIGNS			
STUDY: 104 IP	4A GROUP: DOSE:	4-M 30(mg/kg)	SEX:	MALE		
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
446	Dark Material Around Nose Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3		DAY 1 DAY 10 DAY 10 DAY 1 DAY 1 DAY 1 DAY 0	DAY 13 DAY 11 DAY 1 DAY 1 DAY 1 DAY 0	9 3 2 1 1 13 1 1 1 1 13 1 1	
447	Scheduled Sacrifice Activity Decreased Animal Found Dead Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat Rough Coat 2 Rough Coat 3	. 1	DAY 14 DAY 2 DAY 2 DAY 3 DAY 1 DAY 0	DAY 14 DAY 2 DAY 2 DAY 3 DAY 2 DAY 0 DAY 0 DAY 0 DAY 0 DAY 2	1 1 1 1 2 1 1 1 2 1	
448	Activity Decreased Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1	OAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 OAY 0 DAY 0 DAY 1 OAY 0 DAY 0	OAY 13 DAY 13 DAY 0 DAY 0 DAY 0 DAY 0 DAY 13 DAY 0 DAY 0 DAY 14	6 13 1 1 1 13 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



••••••	INE	DIVIDUAL CLINIC	CAL SIGNS			•••••••
STUDY: 1041 DAY 0-DAY 1	P4A GRO DOS	OUP: 4-M SE: 30(mg/kg)	SEX:	MALE		
ANIMAL	* OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
449 450	Abdomen Bloated Animal Found Dead Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 1 Rough Coat 2 Rough Coat 3 Abdomen Bloated Activity Decreased	1	DAY 1 DAY 3 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1	DAY 2 DAY 3 DAY 2 DAY 0	2 1 2 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	
	Animal Found Dead Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3		DAY 4 DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0	DAY 4 DAY 3 DAY 0 DAY 0 DAY 0 DAY 0 DAY 3 DAY 0 DAY 0 DAY 0	1 3 1 1 3 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVI	DUAL CLINICAL	L SIGNS			
STUDY: 104P02 DAY 0-DAY 14	GROUP: DOSE:	1-M 550(mg/kg)	SEX	: MALE		
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
601	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Activity Decreased Activity 1 Decreased Activity 3 Hunched Posture 3 Lethargic 2 Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1 3 2	DAY 1 DAY 0 DAY 1 DAY 0 DAY 1 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	DAY 3 DAY 0 DAY 0 DAY 3 DAY 0	3 1 1 3 1 1 1 1 4 9 1 1	
602	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Activity Decreased Activity 1 Decreased Activity 2 Decreased Activity 3 Hunched Posture Hunched Posture Blunched Posture Hunched Posture 3 Normal Rough Coat Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1 3 3 2	DAY 1 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1	DAY 3 DAY 0 DAY 0 DAY 0 DAY 3 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 13 DAY 10 DAY 0 DAY 0 DAY 0 DAY 10 DAY 0 DAY 0	3 1 1 1 3 1 1 1 1 1 4 9 1 1 1	
603	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3		DAY 1 DAY 0 DAY 0 DAY 0	DAY 1 DAY 0 DAY 0 DAY 0	1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVII	DUAL CLINICAL	LSIGNS			
STUDY: 104P02 DAY 0-DAY 14	6 GROUP: DOSE:	1-M 550(mg/kg)	SEX:	MALE		
	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
	Comatose Comatose 2 Comatose 3 Decreased Activity 1 Animal Found Dead Labored Breathing 1 Labored Breathing 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3		DAY 1 DAY 0 DAY 0 DAY 0 DAY 2 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0		1 1 1 1 1 1 1 1 1 1	
	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose Comatose 1 Comatose 2 Comatose 3 Decreased Activity Animal Found Dead Hunched Posture Labored Breathing 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3	2	DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 2 DAY 2 DAY 3 DAY 2 DAY 0	DAY 2 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 2 DAY 2 DAY 3 DAY 2 DAY 2 DAY 0 DAY 0 DAY 0	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Activity Decreased Activity Hunched Posture Labored Breathing 1 Labored Breathing 3	1 2	DAY 1 DAY 0 DAY 0 DAY 0 DAY 2 DAY 1 DAY 1 DAY 0 DAY 0	DAY 3 DAY 0 DAY 0 DAY 0 DAY 3 DAY 1 DAY 5 DAY 0	3 1 1 1 2 1 3 1	

Severity No.	Description
I	Slight
2	Moderate
3	Severe



	INDIVII	DUAL CLINICAL	SIGNS			
STUDY: 104P026 DAY 0-DAY 14	GROUP: DOSE:	1-M 550(mg/kg)	SEX:	MALE		
ANIMAL # OBS	SERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
Let Let Nor Rou Rou Rou Rou Rou Rou	thargic 1 thargic 2 thargic 3 mal ugh Coat ugh Coat 1 ugh Coat 2 ugh Coat 3 neduled Sacrifice		DAY 0 DAY 0 DAY 0 DAY 11 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 14	DAY O DAY O DAY 13 DAY 10 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 14	1 1 1 3 10 1 1 1	



										_
••••••			INDIVII	UAL	CLINICAL	81	GNS			
STUDY: 1 DAY 0-DA	04P02 Y 14	6	GROUP: DOSE:	2-M 700 (1	ng/kg)		SEX:	MALE		
A	NIMAL #	OBSERVATIONS		5	EVERITY	LOC	ONSET	DURATION	FREQUENCY	
	,	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 2 Decreased Activ Decreased Activ Hunched Posture Labored Breathi Labored Breathi Labored Breathi Lethargic 1 Lethargic 3 Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3	ritý ng 1 ng 2 ng 3		1 2		DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 1 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0	DAY 3 DAY 0 DAY 0 DAY 0 DAY 0 DAY 3 DAY 2 DAY 6 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 13 DAY 10 DAY 10 DAY 0 DAY 10 DAY 0 DAY 0	3 1 1 1 1 1 2 5 1 1 1 1 1 3 1D 1 1	
	612	Scheduled Sacri Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Activ Decreased Activ Decreased Activ Decreased Activ Decreased Activ Hunched Posture Hunched Posture Hunched Posture Hunched Posture Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacri	ity ity ity 1 ity 2 ity 3		1 2 1 1 2		DAY 14 DAY 1 DAY 0 DAY 0 DAY 0 DAY 3 DAY 1 DAY 0 DAY D DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 1 DAY 1 DAY 0 DAY 1 DAY 1	DAY 14 DAY 3 DAY 0 DAY 0 DAY 0 DAY 2 DAY 0 DAY 13 DAY 10 DAY 11	1 3 1 1 1 1 2 1 1 1 1 1 3 1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVI	DUAL CLINICA	L SIGNS		
STUDY: 104P02 DAY 0-DAY 14	GROUP: DOSE:	2-M 700(mg/kg)	SEX:	MALE	
	OBSERVATIONS		LOC ONSET	DURATION	FREQUENCY
	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 1 Comatose 2 Comatose 3 Decreased Activity Animal Found Dead Hunched Posture Labored Breathing 1 Labored Breathing 2 Labored Breathing 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Blue Feet 1 Blue Feet 2 Blue Feet 2 Blue Feet 3 Comatose 1 Animal Found Dead Labored Breathing 1 Labored Breathing 1 Labored Breathing 1 Labored Breathing 2 Labored Breathing 2 Labored Breathing 3 Lethargic 2 Lethargic 2 Lethargic 2 Lethargic 2 Rough Coat 1 Rough Coat 1 Rough Coat 1 Rough Coat 1 Rough Coat 2 Rough Coat 2 Rough Coat 2	2	DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 3 DAY 2 DAY 0	DAY 2 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 2 DAY 3 DAY 2 DAY 0	2 1 1 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1
615	Blue Feet Blue Feet 1		DAY 0 DAY 1 DAY 0	DAY 3 DAY 0	3

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVI	DUAL CLINICA	L SI	GNS			
STUDY: 104PO2 DAY 0-DAY 14	26 GROUP: DOSE:	2-M 700(mg/kg)		SEX:	MALE		
ANIMAL #	OBSERVATIONS	SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
	Blue Feet 2 Blue Feet 3 Decreased Activity Decreased Activity 2 Hunched Posture Labored Breathing 3 Lethargic 1 Lethargic 3 Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1 2		DAY 0 DAY 0 DAY 2 DAY 0 DAY 4 DAY 0 DAY 0 DAY 1 DAY 1 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1	DAY 0 DAY 3 DAY 0 DAY 5 DAY 0 DAY 0 DAY 0 DAY 0 DAY 13 DAY 10 DAY 0 DAY 0 DAY 10 DAY 0 DAY 1	1 1 2 1 2 1 1 1 3 10 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVI	DUAL CLINICA	L SIGNS			
STUDY: 104PO DAY 0-DAY 14	GROUP: DOSE:	3-M 900(mg/kg)	SEX	: MALE		
ANIMAL #	OBSERVATIONS	SEVERITY		DURATION	FREQUENCY	
621	Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 1 Comatose 2 Comatose 3 Animal Found Dead Labored Breathing 1 Labored Breathing 2 Labored Breathing 3 Rough Coat 1 Rough Coat 2		DAY 0	DAY O	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
622	Rough Coat 3 Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose Comatose 1 Comatose 2 Comatose 3 Animal Found Dead Labored Breathing Labored Breathing 1 Labored Breathing 2 Labored Breathing 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3		DAY 0 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0	DAY 0 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1 DAY 1 DAY 0 DAY 1 DAY 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
623	Ataxia Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3	3	DAY 1 DAY 1 DAY 0 DAY 0 DAY 0	DAY 1 DAY 1 DAY 0 DAY 0 DAY D	1 1 1 1	

Severity No.	Description
I	Slight
2	Moderate
3	Severe



		IVIDUAL	CLINICA	L S	IGNS			
STUDY: 104PO2 DAY 0-DAY 14	26 GROUDOS	UP: 3-M E: 900	(mg/kg)		SEX:	MALE		
	OBSERVATIONS		SEVERITY		ONSET		FREQUENCY	
624	Comatose 1 Comatose 2 Comatose 2 Comatose 3 Decreased Activity Animal Found Dead Labored Breathing Labored Breathing 1 Labored Breathing 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Ataxia 1 Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Activity Decreased Activity Dark Material Around Coat Breathing 1 Labored Breathing 1 Labored Breathing 3 Lethargic 1 Lethargic 2 Lethargic 3 Rough Coat 1 Rough Coat 2 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice		3		DAY 0			
625	Blue Feet 1 Blue Feet 2				DAY 0 DAY 0	DAY O	1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



		INDIVI	DUAL	CLINIC	AL S	IGNS			
STUDY: 104P02 DAY 0-DAY 14	26	GROUP: DOSE:	3-M 900	(mg/kg)		SEX:	MALE		
ANIMAL #	OBSERVATIONS			SEVERITY	FOC	ONSET	DURATION	FREQUENCY	
	Blue Feet 3 Comatose 1 Comatose 2 Comatose 3 Animal Found D Labored Breath Labored Breath Labored Breath Rough Coat 1 Rough Coat 2 Rough Coat 3	ning 1				DAY O DAY O DAY O DAY O DAY 1 DAY O DAY O DAY O DAY O DAY O DAY O	DAY O DAY O DAY O DAY O DAY 1 DAY O	1 1 1 1 1 1 1 1 1 1	

ACUTE ORAL TOXICITY STUDY



	INDIV	IDUAL CLINICA	L SIGNS			
STUDY: 104PO DAY 0-DAY 14	26 GROUP DOSE:	: 4-M 1150(mg/kg)	SEX:	MALE		
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
631	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 2 Comatose 3 Decreased Activity Decreased Activity Hunched Posture Labored Breathing 2 Labored Breathing 3 Lethargic 1 Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1 2 3	DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 1 DAY 1 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 13 DAY 1 DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1	DAY 3 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 6 DAY 0 DAY 12 DAY 0 DAY 0 DAY 12 DAY 0 DAY 0 DAY 12	3 1 1 1 1 1 1 2 1 6 1 1 1 1 1 1 1 1 1 1 1	
632	Ataxia Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 1 Comatose 2 Comatose 3 Animal Found Dead Labored Breathing Labored Breathing 1 Labored Breathing 2 Labored Breathing 3 Rough Coat Rough Coat Rough Coat 2 Rough Coat 3	3	DAY 1 DAY 0 DAY 1 DAY 0	DAY 1 DAY 0 DAY 1 DAY 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



									_
*********		INDIVI	DUAL	CLINICAL	L S	IGNS			
STUDY: 10 DAY 0-DAY	04P026 7 14	GROUP: DOSE:	4-M 1150	(mg/kg)		SEX:	MALE		• • • • • • • • • • • • • • • • • • • •
	IMAL # OBSERVATIO			SEVERITY		ONSET	DURATION	FREQUENCY	
	33 Blue Feet Blue Feet Blue Feet Comatose 2 Comatose 3 Animal Fou Labored Br Labored Br Labored Br Lethargic Rough Coat Rough Coat	nd Dead eathing 1 eathing 2 eathing 3 1				DAY O	DAY O	1 1 1 1 1 1 1 1 1 1	
63	Blue Feet Blue Feet Blue Feet Comatose 1 Comatose 2 Comatose 3 Animal Four Labored Bro Labored Bro Labored Bro Rough Coat Rough Coat	nd Dead eathing 1 eathing 2 eathing 3			٠	DAY D DAY O	DAY O	1 1 1 1 1 1 1 1 1 1 1	
63	Blue Feet Lethargic 1 Lethargic 2	2 S Activity Sture Pathing 1		2		DAY 0 DAY 1 DAY 0 DAY D DAY D DAY 1 DAY 1 DAY 1 DAY D DAY 0	DAY O DAY 3 DAY O DAY D DAY D DAY 3 DAY 12 DAY 0 DAY 0	1 3 1 1 1 3 1D 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVI	DUAL CLINICA	L S	IGNS			
STUDY: 104P026 DAY 0-DAY 14	GROUP: DOSE:	4-M 1150(mg/kg)		SEX:	MALE		
ANIMAL # OBSERVATIONS		SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
Lethargic 3 Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sa	crifice			DAY 0 DAY 13 DAY 1 DAY 0 DAY 0 DAY 0 DAY 14	DAY 0 DAY 13 DAY 12 DAY 0 DAY 0 DAY 0 DAY 14	1 1 12 1 1	



		INDIVI	DUAL CLINICA	L S	IGNS			
STUDY: 104 DAY 0-DAY	P026 14	GROUP: DOSE:	5-M 1500(mg/kg)	*****	SEX:	MALE		**********
ANIMA	L # OBSERVATIONS		SEVERITY		ONSET	DURATION	FREQUENCY	
641	Ataxia Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 3 Decreased Acti Animal Found D Hunched Postur Labored Breath Labored Breath Lethargic 1 Lethargic 2 Rough Coat Rough Coat	ead re ling 1 ling 2	2		DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 2 DAY 1 DAY 2 DAY 1 DAY 0	DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 2 DAY 1 DAY 0	1 1 1 1 1 1 1 1 1 1 1 1 1	
642	Rough Coat 2 Rough Coat 3 Ataxia Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 2 Comatose 3 Dark Material Animal Found D Labored Breath Lethargic 1 Rough Coat 2 Rough Coat 3	ead ing ing 1 ing 2	3		DAY O DAY 1 DAY 1 DAY 0 DAY 1 DAY 2 DAY 1 DAY 2 DAY 1 DAY 0	DAY O		

Severity No.	Description
1	Slight
2	Moderate
3	Severe



STUDY: 1	04P02	6 GRO	UP: 5-M			SEX:	MALE		
ĎĀŸ Ō-DĀ	Y 14	DOS	E: 1500	(mg/kg)					
Al	WIMAL #	OBSERVATIONS	••••	SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
	543	Ataxia		3		DAY 1	DAY 1	4	
		Blue Feet		3		DAY 1	DAY 1	1	
		Blue Feet 1				DAY O	DAY 0	1	
		Blue Feet 2				DAY O	DAY 0	i	
		Blue Feet 3				DAY O	DAY O	i	
		Animal Found Dead				DAY 2	DAY 2	i	
		Labored Breathing				DAY 1	DAY 1	i	
		Labored Breathing 1				DAY O	DAY O	i	
		Labored Breathing 2				DAY O	DAY O	i	
		Labored Breathing 3				DAY O	DAY O	1	
		Lethargic 1				DAY O	DAY 0	1	
		Lethargic 2				DAY O	DAY 0	1	
		Lethargic 3				DAY 0	DAY 0	1	
		Rough Coat				DAY 1	DAY 1	1	
		Rough Coat 1				DAY O	DAY 0	1	
		Rough Coat 2				DAY 0	DAY 0	1	
		Rough Coat 3				DAY 0	DAY 0	1	
6		Blue Feet 1				DAY 0	DAY 0	1	
		Blue Feet 2				DAY 0	DAY 0	1	
		Blue Feet 3				DAY 0	DAY 0	1	
		Comatose 1				DAY 0	DAY 0	1	
		Comatose 2				DAY 0	DAY 0	1	
		Comatose 3				DAY 0	DAY O	1	
		Animal Found Dead				DAY 1	DAY 1	1	
		Labored Breathing 1 Labored Breathing 2				DAY O	DAY O	1	
		Labored Breathing 3				DAY O	DAY 0]	
		Rough Coat 1				DAY O	DAY 0	1	
		Rough Coat 2				DAY O	DAY O	1	
		Rough Coat 3				DAY O	DAY O	i	
6	45	Ataxia		3		DAY 1	DAY 1	1	
_		Blue Feet		-		DAY 1	DAY 1	1	
		Blue Feet 1				DAY O	DAY O	1	
		Blue Feet 2				DAY O	DAY O	i	
		Blue Feet 3				DAY O	DAY O	i	
		Animal Found Dead				DAY 2	DAY 2	4	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVIDUAL CLINICAL SIGNS							
STUDY: 104PC DAY 0-DAY 14	26	GROUP: DOSE:	5-M 1500(mg/kg)		SEX:	MALE		
ANIMAL	OBSERVATIONS		SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
	Labored Breatl Labored Breatl Labored Breatl Labored Breatl Lethargic 1 Lethargic 2 Lethargic 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3	ning 1 ning 2			DAY 1 DAY 0	DAY 1 DAY 0	1 1 1 1 1 1 1 1 1 1	



		DUAL CLINICAL				
STUDY: 104PO DAY 0-DAY 14	6A GROUP: DOSE:	2-M 230(mg/kg)	SEX:	MALE		
	OBSERVATIONS		LOC ONSET	DURATION	FREQUENCY	
431	Ataxia Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Blue Tail Comatose 3 Activity Decreased Activity Decreased 1 Activity Decreased 2 Animal Found Dead Hunched Posture 1 Rough Coat Rough Coat 1	3 3 2 2	DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1	DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1	1 1 1 1 1 1 1 1 1 1 1 1 1	
432	Rough Coat 3 Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Blue Tail Activity Decreased Activity Decreased 1 Activity Decreased 2 Activity Decreased 3 Hunched Posture Hunched Posture 2 Normal Rough Coat Rough Coat 3 Scheduled Sacrifice	2 1 2 2	DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 2 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1	DAY 0 DAY 3 DAY 0 DAY 0 DAY 0 DAY 2 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 11 DAY 0 DAY 13 DAY 14	1 3 1 1 1 2 2 1 1 1 6 1 4 9 1	
433	Blue Feet 1 Blue Feet 2 Blue Feet 3 Activity Decreased 1 Activity Decreased 2	2 3	DAY O DAY O DAY O DAY O DAY O	DAY O DAY O DAY O DAY O DAY O	1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



		INDIVI	DUAL C	LINICAL	SIG	NS				
STUDY: 104P06 DAY 0-DAY 14	6A	GROUP: DOSE:	2-M 230 (m	g/kg)	SI	EX:	MAI	E	• • • • • • • •	•••••
ANIMAL #	OBSERVATIONS		SE	VERITY L	OC ONS	ET	DUR	TION	FREQUENC	CY
	Activity Decre Animal Found D Hunched Postur Rough Coat 2 Rough Coat 3	ead		2	DAY DAY DAY	D 1 0 D 0	DAY DAY DAY			
434	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Activity Decree	ased 1 ased 2 ased 3 e e 1 e 2 e 3		1 2 2 1	DAY	1 0 0 0 4 0 0 0	DAY	0 0 0 2 D 0 0 0 11 0 D D D D D D D	3 1 1 1 2 1 1 1 3 1 1 5 8 1 1 1	
435	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Activity Decree Hunched Posture Hunched Posture Hunched Posture Hunched Posture	ased 1 ased 2 ased 3 Around Eyes e 1 e 2		1 3 2 1	DAY	0 1 0 0 0 0 0 0 0	DAY DAY DAY DAY DAY DAY DAY DAY DAY DAY	D D D D D D D D D D D D D D D D D D D	4 1 1 3 1 1 1 3 9 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



INDIVIDUAL CLINICAL SIGNS							
STUDY: 104P06A DAY 0-DAY 14	GROUP: DOSE:	2-M 230(mg/kg)	S	EX:	MALE		
 ANIMAL # OBSERVATIONS		SEVERITY	LOC ON	ISET	DURATION	FREQUENCY	
Normal Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Saci	rifice		DA DA	1 7 1 7 1 1 7 0 1 7 0 1 7 0 1 7 14	DAY 7 DAY 13 DAY 0 DAY 0 DAY 14	1 12 1 1	



INDIVIDUAL CLINICAL SIGNS STUDY: 104P06A GROUP: 3-M SEX: MALE DAY 0-DAY 14 DOSE: 350(mg/kg)	
STUDY: 104P06A GROUP: 3-M SEX: MALE	
DAY 0-DAY 14 DOSE: 350 (mg/kg)	
ANIMAL # OBSERVATIONS SEVERITY LOC ONSET DURATION FREQUENCY	,
Blue Feet DAY 1 DAY 2 2	
Activity Decreased 1 Activity Decreased 1 Activity Decreased 1 Activity Decreased 1 Rough Coat 3 Coat 3 Coat 3 Coat 3 Coat 3 Coat 0 Co	
Blue Feet 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVID	UAL CLINICAL	L SIGNS			
STUDY: 104P06A DAY 0-DAY 14	GROUP: DOSE:	3-M 350(mg/kg)	SEX	: MALE		
ANIMAL # OBS	SERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
Blu Blu Blu Act Act Act Ani Hun Rou Rou Rou	axia ue Feet ue Feet 1 ue Feet 2 ue Feet 3 tivity Decreased tivity Decreased 2 tivity Decreased 2 tivity Decreased 3 rk Material Around Eyes imal Found Dead nched Posture 2 ugh Coat ugh Coat 1 ugh Coat 3	2 3 3 3 3 3	DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 2 DAY 0 DAY 1 DAY 0 DAY 0	DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 2 DAY 1 DAY 2 DAY 0 DAY 1 DAY 2	1 1 1 1 1 1 1 1 1 1 1 1 1	
425 Ani	imal Found Dead		DAY 0	DAY O	1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

		INDIVI	DUAL CLINICA	L SI	GNS			
 STUDY: 104PC DAY 0-DAY 14)6B 1	GROUP: DOSE:	1-M 40(mg/kg)		SEX:	MALE		
ANIMAL	# OBSERVATIONS		SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
	_							
751	Blue Feet 3				DAY 0	DAY 0	1	
	Hunched Postur				DAY 1	DAY 1	1	
	Hunched Postur				DAY 0	DAY 0	1	
	Hunched Postur				DAY 0	DAY 0	1	
	Hunched Postur	e 3			DAY 0	DAY O	1	
	Normal				DAY 9	DAY 12	4	
	Rough Coat Rough Coat 1				DAY 1	DAY 13	9	
	Rough Coat 2				DAY 0	DAY O	1	
	Rough Coat 3				DAY 0	DAY O		
	Scheduled Sacr	ifica			DAY 0 DAY 14	DAY 0 DAY 14	1	
	JUNEGOLEG GOL	11100			DAI 14	DAI 14	'	
752	Blue Feet 3				DAY 0	DAY 0	1	
	Hunched Postur	e			DAY 1	DAY 1	1	
	Hunched Postur				DAY O	DAY O	1	
	Hunched Postur				DAY 0	DAY 0	1	
	Hunched Postur	e 3			DAY 0	DAY O	1	
	Normal				DAY 6	DAY 13	8	
	Rough Coat				DAY 1	DAY 5	5	
	Rough Coat 1				DAY 0	DAY O	1	
	Rough Coat 2				DAY 0	DAY 0	1	
	Rough Coat 3 Scheduled Sacr	:4:			DAY O	DAY O		
	Scheduled Saci	Trice			DAY 14	DAY 14	1	
753	Blue Feet 1				DAY 0	DAY 0	1	
	Blue Feet 2				DAY O	DAY O	i	
	Blue Feet 3				DAY O	DAY 0	1	
	Hunched Postur	e			DAY 1	DAY 3	3	
	Hunched Postur	e 2			DAY O	DAY 0	1	
	Hunched Postur	e 3			DAY 0	DAY 0	1	
	Normal				DAY 9	DAY 13	5	
	Rough Coat				DAY 2	DAY 8	7	
	Rough Coat 1				DAY 0	DAY O	1	
	Rough Coat 2				DAY 0	DAY O	1	
	Rough Coat 3				DAY O	DAY O	1	
	Scheduled Sacr	itice			DAY 14	DAY 14	1	



			INDIVI	DUAL	CLINICA	L S	igns			
STUDY: DAY 0-D	104P06 AY 14	SB	GROUP: DOSE:	1-M 40 (n	ıg/kg)		SEX:	MALE		
	ANIMAL #	OBSERVATIONS			SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
	754 755	Blue Feet 1 Blue Feet 2 Blue Feet 3 Hunched Postur- Hunched Postur- Hunched Postur- Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacr Blue Feet 1 Blue Feet 2	e 1 e 2 e 3				DAY O	OAY O DAY O	1 1 5 1 1 7 5 1 1 1 1 1	
		Blue Feet 3 Hunched Posture Hunched Posture Hunched Posture Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacr	e 1 e 2 e 3				DAY 0 DAY 1 DAY 0 DAY 1	DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 13 OAY 9 DAY 0 DAY 0 DAY 0 DAY 14	1 1 1 1 5 8 1 1 1	



		INDIVII	DUAL CLI	NICAL S	IGNS			
STUDY: 104PO DAY 0-DAY 14	6B	GROUP: DOSE:	2-M 80(mg/k	g)	SEX:	MALE		•••••
	OBSERVATIONS		SEVER	ITY LOC	ONSET	DURATION	FREQUENCY	
761	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Hunched Posture Hunched Posture Hunched Posture Labored Breathin Normal Rough Coat 1 Rough Coat 2 Rough Coat 2 Rough Coat 3 Scheduled Sacri Blue Feet 1 Blue Feet 2 Blue Feet 2 Blue Feet 3 Decreased Activ Decreased Activ Hunched Posture	fice ity ity 1 2	1		DAY 1 DAY 0	DAY 1 DAY 0 DAY 0 DAY 9 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 13 DAY 12 DAY 0 DAY 0	1 1 1 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacri	fice			DAY O DAY O DAY O DAY 14	DAY O DAY O DAY O DAY 14	1 1	
763	Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Activi	ity	1		DAY 0 DAY 0 DAY 0 DAY 1	DAY O DAY O DAY O DAY 1	1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



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***************************************	INDIVID	UAL CLINICA	L SIGNS			••••••
STUDY: 104P06B DAY 0-DAY 14	GROUP: DOSE:	2-M 80(mg/kg)	SEX:	MALE		• • • • • • • • • • • • • • • • • • • •
ANIMAL # OBSERVATION	S		LOC ONSET		FREQUENCY	
Hunched Pos	ture 1 ture 2 ture 3	1 1 2	DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 0	DAY O DAY O DAY O DAY O DAY O DAY 13 DAY 11 DAY 0 DAY 0 DAY 0	1 1 1 4 1 1 1 3 10 1 1	
764 Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased A	etivity etivity etivity eure eure 1 eure 2 eure 3	1 1 1	DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1	DAY O DAY 13 DAY 12 DAY O DAY O	1 1 1 1 1 3 1 1 1 2 11 1 1 1	
765 Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Ac Decreased Ac	tivity	1 1 1	DAY 1 DAY D DAY 0	DAY 1 DAY D DAY 0 DAY D DAY D DAY D DAY D DAY D DAY D	1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

DRAFT

	INDIVI	DUAL CLINICA	L SIGNS			
STUDY: 104P06 DAY 0-DAY 14	B GROUP: DOSE:	2-M 80(mg/kg)	SEX:	MALE		
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
	Hunched Posture Hunched Posture 1 Hunched Posture 3 Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice		DAY 1 DAY 0 DAY 0 DAY 8 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 14	DAY 9 DAY 0 DAY 0 DAY 8 DAY 13 DAY 0 DAY 0 DAY 0 DAY 0 DAY 14	5 1 1 1 1 12 1 1 1	



A state of the sta	VICTOR STATE OF THE PARTY AND ADDRESS OF THE P						
	INDIVI	DUAL CLINICA	L S	IGNS			
STUDY: 104PO DAY 0-DAY 14	6B GROUP: DOSE:	3-M 150(mg/kg)		SEX:	MALE		,
	OBSERVATIONS	SEVERITY	LOC	ONSET	DURATION		
771	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Activity Decreased Activity Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1 2 1		DAY 1 DAY 0 DAY 0	DAY 1 DAY 0 DAY 13 DAY 0 DAY 0 DAY 14	1 1 1 1 1 1 6 1 1 1 1 13 1 1 1	
772	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Activity Decreased Activity Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1 1 1		DAY 1 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1	DAY 1 DAY 0 DAY 13 DAY 0 DAY 0 DAY 0	1 1 1 1 1 1 1 6 1 1 1 1 1 1 3 1 1 1 1 1	
773	Blue Feet 1 Blue Feet 2			DAY 1 DAY 0 DAY 0	DAY 1 DAY 0 DAY 0	1 1 1	
773	Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice Blue Feet Blue Feet 1	1		DAY 2 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0	DAY 9 DAY 0 DAY 0 DAY 0 DAY 13 DAY 0	1 1 13 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



		••••					
	INDIVID	UAL CLINICA	L SI	GNS			
STUDY: 104P06B DAY 0-DAY 14	GROUP: DOSE:	3-M 150(mg/kg)		SEX:	MALE	•	
ANIMAL # OBSERVATIONS		SEVERITY	Loc	ONSET	DURATION	FREQUENCY	
	ctivity tivity tivity ure ure 1 ure 2 ure 3	1 2 2 2		DAY 0	DAY O	1 1 1 7 1 1 1 1 13 1	
774 Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Ac Decreased Ac Hunched Post Hunched Post Hunched Post Hunched Post Rough Coat 1 Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sa	tivity tivity tivity ure ure 1 ure 2 ure 3	2 3 2		DAY 14 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1		1 1 1 1 1 1 1 1 7 1 1 1 1 1 1 1 1 1 1 1	
775 Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Blue Tail Decreased Ac Decreased Ac		1	0 0 0	DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0	DAY 1 DAY D DAY 0 DAY 0 DAY 1 DAY 0 DAY D	1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

ACUTE ORAL TOXICITY STUDY



	INDIVI	DUAL CLINICA	L S	IGNS			
STUDY: 104P06B DAY 0-DAY 14	GROUP: DOSE:	3-M 150(mg/kg)		SEX:	MALE		,
ANIMAL # OBSERV	/ATIONS	SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
Hunche Hunche Hunche Hunche Rough Rough Rough Rough		1		DAY O DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0	DAY 0 DAY 13 DAY 0 DAY 13 DAY 0 DAY 0 DAY 14	1 8 1 1 1 13 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVI	DUAL CLINICA	L SIGNS			
STUDY: 1041 DAY 0-DAY 1	P26 GROUP: DOSE:	1-M 30(mg/kg)	SEX:	MALE		
ANIMAL	# OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
651	Blue Feet #1 Blue Feet #2 Blue Feet #3 Decreased Activity #2 Decreased Activity #3 Hunched Posture Hunched Posture #3 Lethargic #1 Normal Rough Coat Rough Coat #2	3 3	DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1	DAY O DAY O DAY O DAY 3 DAY O DAY 13 DAY 3 DAY 3	1 1 1 1 1 2 1 1 10 3	
652	Rough Coat #3 Scheduled Sacrifice Blue Feet #1 Blue Feet #2 Blue Feet #3 Decreased Activity #1 Decreased Activity #3 Hunched Posture Hunched Posture #1 Hunched Posture #2 Hunched Posture #3 Normal Rough Coat Rough Coat Rough Coat #3 Scheduled Sacrifice	1 1 3	DAY 0 DAY 14 DAY 0 DAY 1	DAY 0 DAY 14 DAY 0 DAY 13 DAY 8 DAY 0 DAY 14	1 1 1 1 1 1 1 2 1 1 5 8 1 1	
653	Blue Feet #1 Blue Feet #2 Blue Feet #3 Hunched Posture Hunched Posture #2 Hunched Posture #3 Lethargic #1 Lethargic #2		DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	DAY 0 DAY 0 DAY 0 DAY 7 DAY 0 DAY 0 DAY 0	1 1 3 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVII	OUAL CLINICAL	L SIGNS			
STUDY: 1041P2 DAY 0-DAY 14	GROUP: DOSE:	1-M 30(mg/kg)	SEX:	MALE		
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION		
	Lethargic #3 Normal Rough Coat Rough Coat #2 Rough Coat #3		DAY 9 DAY 1 DAY 0 DAY 0	DAY 0 DAY 13 DAY 8 DAY 0 DAY 0	1 5 8 1	
654	Scheduled Sacrifice Blue Feet #1 Blue Feet #2 Blue Feet #3 Decreased Activity Decreased Activity #3 Dark Material Around Nose Hunched Posture Hunched Posture #1 Hunched Posture #3 Lethargic #1 Lethargic #2 Normal Rough Coat Rough Coat Rough Coat #1 Rough Coat #2	2 3	DAY 14 DAY 0 DAY 0 DAY 1 DAY 1 DAY 1 DAY 1 DAY 0 DAY 0	DAY 14 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 6 DAY 0 DAY 0	1 1 1 1 1 1 1 3 1 1 1 1 1 1 1 1 1 1 1 1	
655	Rough Coat #3 Scheduled Sacrifice Blue Feet #1 Blue Feet #2 Blue Feet #3 Decreased Activity #3 Hunched Posture Hunched Posture #1 Hunched Posture #2 Hunched Posture #3 Lethargic #1 Lethargic #1 Rough Coat	3	DAY 0 DAY 14 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0	DAY 0 DAY 14 DAY 0 DAY 13 DAY 8	1 1 1 1 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



INDIVIDUAL CLINICAL SIGNS							
STUDY: 104IP26 DAY 0-DAY 14	GROUP: DOSE:	1-M 30(mg/kg)	S	EX:	MALE		
ANIMAL # OBSERVATIONS		SEVERITY	LOC ON	ISET	DURATION	FREQUENCY	
Rough Coat #1 Rough Coat #2 Rough Coat #3 Scheduled Saci			DA DA	AY 0 AY 0 AY 0 AY 14	DAY O DAY O DAY O DAY 14	1 1 1	



						in the first first	
		INDIVIDUAL	CLINICAL	SIGNS			
STUDY: 10 DAY 0-DAY	4IP26 14	GROUP: 2-M DOSE: 60(1	mg/kg)	SEX:	MALE		
	MAL # OBSERVATIONS		SEVERITY LO	C ONSET	DURATION	FREQUENCY	
66	1 Blue Feet #1 Blue Feet #2 Blue Feet #3 Decreased Activ	: #2 : #3	2 3 3	DAY O DAY O DAY O DAY 1 DAY O DAY 1 DAY O DAY 0	DAY O DAY 1 DAY O DAY O DAY 3 DAY O DAY O DAY 0 DAY O	1 1 1 1 1 1 3 1 1 1 1 4 9	
662	2 Blue Feet #1 Blue Feet #2 Blue Feet #3	ity #1 ity #3 #2 #3	3 3	DAY 14 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 11 DAY 1 DAY 0 DAY 1 DAY 1 DAY 1 DAY 0 DAY 0 DAY 1 DAY 1	DAY 14 DAY 0 DAY 0 DAY 0 DAY 0 DAY 3 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 13 DAY 10 DAY 0 DAY 0 DAY 0 DAY 10 DAY 0 DAY 0 DAY 0 DAY 10 DAY 0 DAY 0 DAY 10	1 1 1 1 1 1 3 1 1 1 1 3 1 1 1 1 1 1 1 1	
663	Blue Feet #1 Blue Feet #2 Blue Feet #3 Decreased Activ	ity	2	DAY O DAY O DAY O DAY 1	DAY O DAY O DAY O DAY 1	1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



		INDIVI	DUAL CLINICA	L SI	GNB			
STUDY: 1041P2 DAY 0-DAY 14	26	GROUP: DOSE:	2-M 60(mg/kg)	•••••	SEX:	MALE		
	OBSERVATIONS		SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
	Decreased Acti- Hunched Postur- Hunched Postur- Hunched Postur- Lethargic #1 Lethargic #2 Normal Rough Coat #2 Rough Coat #1 Rough Coat #2 Rough Coat #3	e e #2	3		DAY O DAY O DAY O DAY O DAY O DAY O DAY 1 DAY 1 DAY 0 DAY 1 DAY 0 DAY 0	DAY 0 DAY 3 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 13 DAY 9 DAY 0 DAY 0 DAY 0	1 3 1 1 1 1 4 9	
664	Scheduled Sacri Blue Feet #1 Blue Feet #2 Blue Feet #3 Decreased Activ Decreased Activ Hunched Posture Hunched Posture Lethargic #1 Lethargic #2 Lethargic #3 Normal Rough Coat Rough Coat #1 Rough Coat #2 Rough Coat #3 Scheduled Sacri	vity vity = #3	1 2		DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 1 DAY 1 DAY 0 DAY 1 DAY 1	DAY 14 DAY 0 DAY 0 DAY 0 DAY 3 DAY 1 DAY 3 DAY 0 DAY 13 DAY 10 DAY 0 DAY 14	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
665	Blue Feet #1 Blue Feet #2 Blue Feet #3 Decreased Activ Hunched Posture Hunched Posture Hunched Posture Lethargic #1	#2	1	((((DAY 0 DAY 0 DAY 0 DAY 1 DAY 1 DAY 0 DAY 0	DAY O DAY O DAY O DAY 3 DAY 3 DAY 0 DAY 0 DAY 0 DAY 0	1 1 1 2 3 1 1	

Description
Slight
Moderate
Severe



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	INDIVI	OUAL CLINICA	L S	IGNS			
STUDY: 104IP26 DAY 0-DAY 14	GROUP: DOSE:	2 -M 60(mg/kg)		SEX:	MALE		
ANIMAL # OBSERVATIONS		SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
Lethargic #2 Lethargic #3 Normal Rough Coat Rough Coat #1 Rough Coat #2 Rough Coat #3 Scheduled Sacr	rifice			DAY 0 DAY 0 DAY 7 DAY 1 DAY 0 DAY 0 DAY 0 DAY 14	DAY 0 DAY 0 DAY 13 DAY 12 DAY 0 DAY 0 DAY 0 DAY 14	1 1 5 8 1 1 1	



		DUAL CLINICA				************
STUDY: 104IP: DAY 0-DAY 14	26 GROUP: DOSE:	3-M 125(mg/kg)	SEX:	MALE		
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
671	Blue Feet #1 Blue Feet #2 Blue Feet #3 Comatose #3 Animal Found Dead Labored Breathing #1 Labored Breathing #2 Labored Breathing #3 Lethargic #1 Rough Coat #1 Rough Coat #2 Rough Coat #3		DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0	DAY O	1 1 1 1 1 1 1 1 1 1	
672	Blue Feet Blue Feet #1 Blue Feet #2 Blue Feet #2 Blue Feet #3 Comatose #1 Comatose #2 Comatose #3 Animal Found Dead Hunched Posture Labored Breathing #1 Labored Breathing #2 Labored Breathing #3 Lethargic Rough Coat Rough Coat Rough Coat #2 Rough Coat #3		DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 2 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0	DAY 1 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
673	Blue Feet #1 Blue Feet #2 Blue Feet #3 Decreased Activity Decreased Activity	1 2 1	DAY 0 DAY 0 DAY 0 DAY 2 DAY 1 DAY 0	DAY O DAY O DAY O DAY 3 DAY 1 DAY O	1 1 1 2 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	I	NDIVIDU	AL CLINICA	AL SIG	NS			
STUDY: 104IP DAY 0-DAY 14	26 GI D0	ROUP: 3	-M 25(mg/kg)	S	EX:	MALE		
	OBSERVATIONS		SEVERITY			DURATION	FREQUENCY	
	Decreased Activit Hunched Posture Hunched Posture # Hunched Posture # Lethargic #2 Normal Rough Coat Rough Coat #1 Rough Coat #1 Rough Coat #2 Rough Coat #3 Scheduled Sacrific	23	3	DA DA DA DA DA DA DA	AY 0 AY 1 AY 0 AY 0 AY 0 AY 13 AY 1 AY 0 AY 0 AY 0 AY 14	DAY 0 OAY 9 OAY 0 DAY 0 DAY 13 DAY 12 DAY 0 DAY 0 DAY 0 DAY 0	1 6 1 1 1 1 1 1 1 1 1 1	
674	Blue Feet #1 Blue Feet #2 Blue Feet #2 Blue Feet #3 Oecreased Activity Oecreased Activity Decreased Activity Hunched Posture Hunched Posture #2 Hunched Posture #2 Lethargic #2 Normal Rough Coat Rough Coat #1 Rough Coat #3 Scheduled Sacrific	y y #1 y #3 2	1 3 2 3	DA DA DA DA DA DA DA DA DA DA	NY 0 NY 0 NY 0 NY 2 NY 1 NY 0 NY 1 NY 0 NY 13 NY 0 NY 13 NY 0 NY 14	DAY O DAY O DAY 3 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 12 DAY 0 DAY 13 DAY 12 DAY 0 DAY 13 DAY 12 DAY 0 DAY 14	1 1 1 2 1 1 1 7 1 1 1 1 1 1 1 1 1 1 1 1	
675	Blue Feet #1 Blue Feet #2 Blue Feet #3 Comatose #1 Comatose #2 Animal Found Dead Labored Breathing Labored Breathing	#1		DA DA DA DA DA	Y 0 Y 0 Y 0 Y 0 Y 0 Y 0 Y 1	DAY O DAY O DAY O DAY O DAY D DAY 1 DAY 0 DAY D	1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



		INDIVI	DUAL CLINICA	L SIGN	S		
	STUDY: 104IP26 DAY 0-DAY 14	GROUP: DOSE:	3 -M 125(mg/kg)	SE	X: MALE		
•••	ANIMAL # OBSERVATIONS		SEVERITY	LOC ONSE	T DURATION	FREQUENCY	
•••	Labored Breath Lethargic #3 Rough Coat #1 Rough Coat #2 Rough Coat #3	ing #3		DAY DAY DAY DAY DAY	0 DAY 0 0 DAY 0 0 DAY 0	1 1 1 1 1	



				The state of		
	INDIVII	OUAL CLINICAL	SIGNS			
STUDY: 104IP26 DAY 0-DAY 14	GROUP: DOSE:	4-M 250(mg/kg)	SEX:	MALE		
ANIMAL # C	OBSERVATIONS	SEVERITY	LOC ONSET		FREQUENCY	
B B C C C A L L L R R R	Blue Feet #1 Blue Feet #2 Blue Feet #3 Comatose #1 Comatose #3 Animal Found Oead Labored Breathing #1 Labored Breathing #2 Labored Breathing #3 Rough Coat #1 Rough Coat #1 Rough Coat #3		OAY O DAY O	DAY O	1 1 1 1 1 1 1 1 1 1 1	
B B D D D D H H H H R R R R R	Blue Feet #1 Blue Feet #2 Blue Feet #2 Blue Feet #3 Decreased Activity Decreased Activity #1 Decreased Activity #2 Decreased Activity #3 Hunched Posture Hunched Posture #1 Hunched Posture #2 Hunched Posture #3 Hormal Hough Coat Blough Coat #1 Hough Coat #2 Hough Coat #3	1 3 3 2 2	DAY 0 DAY 0 DAY 3 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 10 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1	DAY O DAY 13 OAY 9 DAY O DAY O DAY O DAY O DAY O	1 1 1 1 1 1 1 1 6 1 1 1 1 4 9 1 1 1	
8 8 8	lue Feet Blue Feet #1 Blue Feet #2 Blue Feet #3 Decreased Activity	1	DAY 1 DAY 0 DAY 0 DAY 0 DAY 1	OAY 9 DAY 0 DAY 0 DAY 0 OAY 3	2 1 1 3	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



	INDIVI	DUAL CLINICAL	SIGNS		
STUDY: 1041P2 DAY 0-DAY 14	GROUP: DOSE:	4-M 250(mg/kg)	SEX:	MALE	••••••••••
	OBSERVATIONS	SEVERITY L	OC ONSET	DURATION	FREQUENCY
	Decreased Activity #1	2 3 3	DAY O		1
	Decreased Activity #2	3	DAY O	DAY 0	1
	Decreased Activity #3	3	DAY O	DAY 0	1
	Hunched Posture		DAY 1	DAY 8	6
	Hunched Posture #1		DAY 0	DAY 0	1
	Hunched Posture #2		DAY 0	DAY 0	1
	Hunched Posture #3		DAY 0	DAY 0	1
	Normal		DAY 13	DAY 13	1
	Rough Coat		DAY 1	DAY 12	12
	Rough Coat #1		DAY O	DAY O	1
	Rough Coat #2		DAY O	DAY O	1
	Rough Coat #3		DAY O	DAY O	1
	Scheduled Sacrifice		DAY 14	DAY 14	1
684	Blue Feet #1		DAY 0	DAY 0	1
	Blue Feet #2		DAY D	DAY D	i
	Blue Feet #3		DAY O	DAY O	1
	Comatose #1		DAY O	DAY D	i
	Comatose #2		DAY O	DAY D	i
	Comatose #3		DAY O	DAY O	1
	Animal Found Dead		DAY 1	DAY 1	1
	Labored Breathing #1	•	DAY O	DAY O	1
	Labored Breathing #2		DAY 0	DAY O	1
	Labored Breathing #3		DAY O	DAY O	i
	Rough Coat #1		DAY O	DAY O	i
	Rough Coat #2		DAY D	DAY D	1
	Rough Coat #3		DAY D	DAY 0	1
685	Blue Feet #1		DAY 0	DAY D	1
	Blue Feet #2		DAY O	DAY O	1
	Blue Feet #3		DAY O	DAY O	1
	Comatose #1		DAY D	DAY D	1
	Comatose #2		DAY D	DAY D	1
	Comatose #3		DAY O	DAY D	1
	Animal Found Dead		DAY 1	DAY 1	1
	Labored Breathing #1		DAY O	DAY D	1
	Labored Breathing #2		DAY O	DAY O	1
	Labored Breathing #3		DAY O	DAY D	1
	Rough Coat #1		DAY O	DAY O	1
	Rough Coat #2		DAY O	DAY 0	1
	Rough Coat #3		DAY O	DAY O	1

Severity No.	Description
1	Slight
2	Moderate
3	Severe



***************************************	INDIVIDU	AL CLINICAI	L SIGNS			
STUDY: 104IP2 DAY 0-DAY 14	6 GROUP: 5 DOSE: 5	-M 00(mg/kg)	SEX:	MALE		
	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
691	Blue Feet Blue Feet #1 Blue Feet #2 Blue Feet #3 Decreased Activity Decreased Activity #1 Hunched Posture Hunched Posture #2 Hunched Posture #3 Labored Breathing #3 Lethargic Lethargic #2 Lethargic #3 Normal Rough Coat Rough Coat Rough Coat #1 Rough Coat #2 Rough Coat #3 Scheduled Sacrifice	1 3	DAY 1 OAY 0 DAY 0 DAY 3 DAY 0 DAY 3 DAY 0 DAY 1 DAY 0 OAY 0 DAY 1 DAY 0 DAY 1	DAY 1 DAY 0 DAY 0 DAY 0 DAY 3 DAY 0 DAY 9 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 12 DAY 0 DAY 0 DAY 12 DAY 0 DAY 0 DAY 14	1 1 1 1 1 1 9 1 1 1 1 1 1 1 1 1 1 1 1 1	
	Blue Feet #1 Comatose #1 Animal Found Dead Labored Breathing #1 Rough Coat #1		DAY O DAY O DAY O DAY O DAY O	DAY O DAY O DAY O DAY O	1 1 1 1	
	Blue Feet #1 Blue Feet #2 Blue Feet #3 Comatose #2 Comatose #3 Decreased Activity #1 Animal Found Dead Hunched Posture #1 Labored Breathing #2 Labored Breathing #3 Rough Coat #1 Rough Coat #2 Rough Coat #3	3	DAY O DAY D OAY O DAY O DAY O DAY O DAY 1 DAY D DAY O DAY O DAY O DAY O DAY O DAY O	DAY O DAY D DAY O	1 1 1 1 1 1 1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



INDIVIDUAL CLINICAL SIGNS									
STUDY: 104IP26 DAY 0-DAY 14		GROUP: DOSE:	5-M 500(mg/kg)		SEX:	MALE		
ANIMAL #	OBSERVATIONS			SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
694	Blue Feet #1 Comatose #1 Animal Found D Labored Breath Rough Coat #1					DAY O DAY O DAY O DAY O DAY O	DAY O DAY O DAY O DAY O DAY O	1 1 1 1	
695	Blue Feet #1 Blue Feet #2 Blue Feet #3 Comatose #1 Comatose #2 Comatose #3 Animal Found Dabored Breath Labored Breath Rough Coat #1 Rough Coat #2 Rough Coat #3	ning #1 ning #2				DAY O	DAY O	1 1 1 1 1 1 1 1 1 1 1	



		DUAL CLINICAL	SIGNS		
STUDY: 104P02 DAY 0-DAY 14	GROUP: DOSE:	3-F 20(mg/kg)	SEX:	FEMALE	
ANIMAL #	OBSERVATIONS	SEVERITY LO	OC ONSET	DURATION	FREQUENCY
506	Normal Normal 1 Normal 2 Normal 3 Rough Coat Scheduled Sacrifice		DAY 1 DAY 0 DAY 0 DAY 0 DAY 2 DAY 14	DAY 13 DAY 0 DAY 0 DAY 0 DAY 11 DAY 14	8 1 1 1 5 1
507	Normal Normal 1 Normal 2 Normal 3 Rough Coat Scheduled Sacrifice		DAY 1 DAY 0 DAY 0 DAY 0 DAY 4 DAY 14	DAY 13 DAY 0 DAY 0 DAY 0 DAY 7 DAY 14	9 1 1 1 4
508	Normal Normal 1 Normal 2 Rough Coat Rough Coat 3 Scheduled Sacrifice		DAY 4 DAY 0 DAY 0 DAY 1 DAY 0 DAY 14	DAY 13 DAY 0 DAY 0 DAY 7 DAY 0 DAY 14	7 1 1 6 1
509	Normal Normal 1 Normal 2 Rough Coat Rough Coat 3 Scheduled Sacrifice		DAY 6 DAY 0 DAY 0 DAY 1 DAY 0 DAY 14	DAY 13 DAY 0 DAY 0 DAY 7 DAY 0 DAY 14	7 1 1 6 1
510	Normal Normal 1 Normal 2 Normal 3 Rough Coat Scheduled Sacrifice		DAY 1 DAY 0 DAY 0 DAY 0 DAY 3 DAY 14	DAY 13 DAY 0 DAY 0 DAY 0 DAY 8 DAY 14	8 1 1 1 5 1



				INDIVII	UAL	CLINIC	AL SI	GNS				
••••••	STUDY: DAY 0-D	104P02 AY 14	4	GROUP: DOSE:	6-F 50(m	ıg/kg)		SEX	: FEM	IALE		
		526	Normal					DAY 8	DAY	13	5	
			Normal 1					DAY O			1	
			Normal 2					DAY O			1 8	
			Rough Coat					DAY 1		12	1	
			Rough Coat 3 Scheduled Sacr	ifica				DAY 0 DAY 14			1	
			Scheduled Saci	11100				DAT 14	DAT	14	,	
		527	Hunched Postur					DAY 1	DAY	-	5	
			Hunched Postur	e 3				DAY 0	DAY		1	
			Normal					DAY 8	DAY		4	
			Normal 1					DAY 0	DAY	-	1	
			Normal 2					DAY 0			1	
			Rough Coat					DAY 1	DAY		9	
			Rough Coat 3	161				DAY 0			1	
			Scheduled Sacr	ifice				DAY 14	DAY	14	1	
		528	Hunched Postur	e				DAY 0	DAY	1	2	
			Normal					DAY 8	DAY		4	
			Normal 1					DAY 0	DAY	-	1	
			Normal 2					DAY 0			1	
			Rough Coat					DAY 1	DAY	-	9	
			Rough Coat 3					DAY 0			1	
			Scheduled Sacr	ifice				DAY 14	DAY	14	1	
		529	Hunched Postur	e				DAY 5	DAY	7	3	
			Normal					DAY 8	DAY	13	2	
			Normal 1					DAY 0	DAY	0	1	
			Normal 2					DAY 0	DAY	0	1	
			Rough Coat					DAY 1	DAY		11	
			Rough Coat 3					DAY 0	DAY	_	1	
			Scheduled Sacr	ifice				DAY 14	DAY	14	1	
		530	Hunched Postur	e				DAY 1	DAY	6	3	
			Hunched Postur	e 3				DAY 0	DAY	0	1	
			Normal					DAY 8	DAY		5	
			Normal 1					DAY 0			1	
			Normal 2					DAY 0	DAY		1	
			Rough Coat					DAY 1	DAY		8	
			Rough Coat 3					DAY 0	DAY		1	
			Scheduled Sacr	ifice				DAY 14	DAY	14	1	

ACUTE ORAL TOXICITY STUDY



			2525220000								
			INDIVII	UAL	CLINICA	L S	igns	••••			
STUDY: 1 DAY 0-DA	04P02 Y 14	4	GROUP: DOSE:	7-F 110(mg/kg)		SEX:	FEM	ALE		
	NIMAL #	OBSERVATIONS			SEVERITY	LOC	ONSET	DUR	ATION		
!	531	Decreased Acti Hunched Postur Normal Normal 1 Normal 2 Rough Coat Rough Coat Scheduled Sacr	e		1		DAY 4 DAY 2 DAY 13 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 1	DAY DAY DAY DAY DAY DAY	4 7 13 0 0 12	1 4 1 1 1 1 12 1	
!		Decreased Activ Hunched Posture Normal Normal 1 Normal 2 Normal 3 Rough Coat Scheduled Sacr	e		1		DAY 4 DAY 3 DAY 11 DAY 0 DAY 0 DAY 0 DAY 1 DAY 14	DAY DAY DAY DAY DAY DAY	7 13 0 0	1 5 2 1 1 1 1 11	
5		Decreased Activ Animal Found Do Hunched Posturo Normal 1 Rough Coat Rough Coat 2 Rough Coat 3	ead		1		DAY 4 DAY 8 DAY 2 DAY 0 DAY 1 DAY 0 DAY 0	DAY DAY DAY DAY DAY DAY	8 7 0 7	2 1 5 1 7 1	
5		Animal Found De Hunched Posture Hunched Posture Normal 1 Normal 2 Rough Coat Rough Coat 3	•				DAY 3 DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0	DAY DAY DAY DAY DAY DAY	2 0 0 0 2	1 2 1 1 1 2 1	
5		Decreased Activ Hunched Posture Normal			1		DAY 4 DAY 1 DAY 12	DAY DAY DAY	7	1 6 2	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

ACUTE ORAL TOXICITY STUDY



INDIVIDUAL CLINICAL SIGNS										
STUDY: 104P02 DAY 0-DAY 14	4 (GROUP: DOSE:	7-F 110(mg/kg)		SEX:	FEMALE				
ANIMAL #	OBSERVATIONS		SEVERITY	LOC	ONSET	DURATION	FREQUENCY			
	Normal 1 Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacris	fice			DAY 0 DAY 1 DAY 0 DAY 0 DAY 14	DAY 0 DAY 11 DAY 0 DAY 0 DAY 14	1 11 1 1			

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		INDIVII	DUAL C	LINICA	L S	IGNS	3			
STUDY: 104P02 DAY 0-DAY 14	24	GROUP: DOSE:	8-F 250 (n	ng/kg)	•••••	SEX	K: FE	MALE		
ANIMAL #	OBSERVATIONS		S	EVERITY	Loc	ONSET	DUI	RATION	FREQUENCY	
536		ead				DAY 2 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0	DAY DAY DAY DAY	7 0 7 0 7 1	1 1 1 1 1 1	
537	Decreased Activ Decreased Activ Dark Material A Hunched Posture Hunched Posture Normal 1 Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacri	ity round Eyes 3		1 2		DAY 4 DAY 6 DAY 1 DAY 0 DAY 1	DAY DAY DAY DAY DAY DAY DAY	10 6 12 13 0 0 13 10 10 13 10	4 1 2 13 1 1 13 1 1	
538	Animal Found De Hunched Posture Hunched Posture Normal 1 Rough Coat Rough Coat 2 Rough Coat 3					DAY 2 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY D	DAY DAY DAY DAY	2 0 0 2	1 3 1 1 2 1	
539	Ataxia Animal Found De: Hunched Posture Hunched Posture Labored Breathin Normal 1 Rough Coat Rough Coat 2 Rough Coat 3	3		1		DAY 4 DAY 5 DAY 1 DAY D DAY 2 DAY 0 DAY 1 DAY 0	DAY DAY DAY DAY DAY DAY	5 4 D 2 0 4 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

ACUTE ORAL TOXICITY STUDY

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	INDIVII	DUAL CLINICA	L SIGNS			
STUDY: 104P0: DAY 0-DAY 14	GROUP: DOSE:	8-F 250(mg/kg)	SEX:	FEMALE		
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
. 540	Decreased Activity Decreased Activity 3 Dark Material Around Eyes Dark Material Around Nose Animal Found Dead Hunched Posture Hunched Posture 3 Normal 1 Rough Coat Rough Coat 2 Rough Coat 3	1 1	DAY 1 DAY 0 DAY 2 DAY 2 DAY 2 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0	DAY 2 DAY 0 DAY 2 DAY 2 DAY 2 DAY 2 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	2 1 1 1 1 2 1 1 2 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

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	1	INDIVID	UAL CLINICA	L S	GNS			
STUDY: 104P02 DAY 0-DAY 14	24 G D	ROUP:	9-F 600(mg/kg)		SEX:	FEMALE		
ANIHAL #	OBSERVATIONS		SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
541	Decreased Activi Animal Found Dea Hunched Posture2 Hunched Posture Normal 1 Rough Coat 2 Rough Coat 3	id !	1		DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	DAY O DAY O DAY O	1 1 1 1 1 1 1	
542	Decreased Activi Decreased Activi Animal Found Dea Hunched Posture Hunched Posture: Normal 1 Rough Coat Rough Coat 2 Rough Coat 3	ty 2 d	1 1		DAY 1 DAY 0 DAY 2 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0	DAY 1 DAY 0 DAY 2 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1	1 1 1 1 1 1 1	
543	Decreased Activi Animal Found Dead Hunched Posture Hunched Posture2 Hunched Posture3 Normal 1 Rough Coat Rough Coat 2 Rough Coat 3	ď	2		DAY 1 DAY 1 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY D DAY 0	DAY 1 DAY 1 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY D DAY 0	1 1 1 1 1 1 1 1	
	Animal Found Dead Hunched Posture2 Hunched Posture3 Normal 1 Rough Coat 2 Rough Coat 3				DAY 1 DAY 0 DAY D DAY D DAY D DAY D	DAY 1 DAY 0 DAY D DAY D DAY 0 DAY 0	1 1 1 1 1	
545	Animal Found Dead Hunched Posture2				DAY 1 DAY D	DAY 1 DAY D	1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



		INDIVI	DUAL CLINICA	AL SI	GNS			
	STUDY: 104P024 DAY 0-DAY 14	GROUP: DOSE:	9-F 600(mg/kg)		SEX:	FEMALE		
ANIMAL # OBSERVATIONS			SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
	Hunched Postur Normal 1 Rough Coat 2 Rough Coat 3	e 3			DAY O DAY O DAY O DAY O	DAY O DAY O DAY O DAY O	1 1 1	



	INDI	VIDUAL CLINIC	AL SIGNS		
STUDY: 10 DAY 0-DAY	4IP24 GROU 14 DOSE	P: 1-F : 20(mg/kg)	SEX:	FEMALE	
ANII	MAL # OBSERVATIONS	SEVERITY	LOC ONSET	DURATION I	FREQUENCY
550		Nose		DAY 2 DAY 2 DAY 2 DAY 2 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	1 1 1 2 1 1 2 1 1
55:	Abdomen Bloated Animal Found Dead Hunched Posture Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3		DAY 2 DAY 3 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	DAY 2 DAY 3 DAY 2 DAY 0	1 1 2 1 1 2 1 1
558	Dark Material Around Munched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Lethargic Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	Nose	DAY 2 DAY 2 DAY 1 DAY 0 DAY 0 DAY 0 DAY 7 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 14	DAY 13 DAY 2 DAY 13 DAY 0 DAY 0 DAY 0 DAY 7 DAY 13 DAY 0 DAY 0 DAY 0 DAY 14 DAY 2	11 1 13 1 1 1 1 13 1 1 1 1
	Hunched Posture Hunched Posture 1		DAY 1 DAY 0	DAY 1 DAY 0	i 1



		INDIVI	DUAL	CLINICA	L S	IGNS			
STUDY: 104IP2 DAY 0-DAY 14	.4	GROUP: DOSE:	1-F 20(n	ng/kg)		SEX:	FEMALE		
ANIMAL #	OBSERVATIONS			SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
560	Hunched Postur Hunched Postur Rough Coat 1 Rough Coat 2 Rough Coat 3 Abdomen Bloate Hunched Postur Hunched Postur Hunched Postur Rough Coat 1 Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacr	ed ee ee 2 ee 3				DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1	DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 13 DAY 13 DAY 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

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	INDIVI	DUAL CLINICAL	SIGNS			
STUDY: 104 DAY 0-DAY	[P24 GROUP: L4 DOSE:	2-F 50(mg/kg)	SEX:	FEMALE		
ANIMA	# OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
566	Abdomen Bloated Blue Feet 2 Decreased Activity 1 Dark Material Around Nose Animal Found Dead Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3	1	DAY 2 DAY 0 DAY 0 DAY 2 DAY 2 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0	DAY D DAY 0 DAY 2 DAY 2 DAY 2 DAY 0	1 1 1 1 2 1 1 1 2	
567	Blue Feet 2 Blue Feet 3 Decreased Activity 1 Decreased Activity 2 Animal Found Dead Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3	1 1	DAY O DAY O DAY O DAY O DAY 2 DAY 1 DAY O DAY O DAY O DAY O DAY D DAY D DAY O DAY O DAY O DAY O	DAY O DAY D DAY D DAY D DAY D DAY C DAY 1 DAY O DAY O DAY O DAY O DAY D DAY D DAY D DAY D DAY D	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
568	Abdomen Bloated Blue Feet 2 Decreased Activity 1 Decreased Activity 3 Dark Material Around Nose Animal Found Dead Hunched Posture Hunched Posture 1 Hunched Posture 2	1 1	DAY 2 DAY 0 DAY 0 DAY D DAY 2 DAY 3 DAY 1 DAY 0 DAY 0	DAY 2 DAY 0 DAY 0 DAY D DAY 2 DAY 3 DAY 2 DAY 0 DAY 0	1 1 1 1 1 2 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

Ť	STUDY	OF WR242511	IN RATS			
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	INDIVI	DUAL CLINICA	L SIGNS			
STUDY: 1041P: DAY 0-DAY 14	GROUP: DOSE:	2-F 50(mg/kg)	SEX:	FEMALE		
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
569	Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Abdomen Bloated Blue Feet 2 Decreased Activity 1 Decreased Activity 2 Decreased Activity 3 Animal Found Dead Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Lethargic Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3	1 1	DAY O OAY 1 DAY O	DAY 0 DAY 2 DAY 0 DAY 2 DAY 0 DAY 0 DAY 2 DAY 0	1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
570	Abdomen Bloated Blue Feet 2 Blue Feet 3 Decreased Activity Decreased Activity 1 Decreased Activity 2 Decreased Activity 3 Animal Found Dead Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3	1 1 1	DAY 2 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 3 DAY 1 DAY 0	DAY 2 DAY 0 DAY 2 DAY 0	1 1 1 2 1 1 1 1 2 1 1 1 1 2 1 1 1 1 1 2 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

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INDIVIDUAL	CLINICAL	SIGNS

DY: 104IP2 0-DAY 14	4 GRO DOS	UP: 3-F E: 110	(mg/kg)		SEX:	FEMALE		
ANIMAL #	OBSERVATIONS		SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
576	Blue Feet 3 Decreased Activity Decreased Activity 1 Decreased Activity 3 Animal Found Dead Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 1 Rough Coat 2 Rough Coat 3	•••••••	2 1 2		DAY O DAY O DAY O DAY O DAY 2 DAY 1 DAY O DAY 0	DAY 0 DAY 1 DAY 0 DAY 0 DAY 2 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0	1 1 1 1 1 1 1 1 1 1	
577	Second Clinical Sign Animal Found Dead Hunched Posture 1 Rough Coat 1				DAY O DAY O DAY O DAY D	DAY O DAY O DAY O DAY D	1 1 1	
578	Second Clinical Sign Decreased Activity 1 Animal Found Dead Hunched Posture 1 Rough Coat 1		1		DAY O DAY O DAY O DAY O DAY O	DAY O	1 1 1 1	
579	Blue Feet 2 Blue Feet 3 Decreased Activity 1 Animal Found Dead Hunched Posture 1 Hunched Posture 3 Lethargic 2 Lethargic 3 Rough Coat 1 Rough Coat 2 Rough Coat 3		1		DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0	DAY 0 DAY 0 DAY 1 DAY 0	1 1 1 1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

ACUTE INTRAPERITONEAL TOXICITY

	INDIVI	DUAL CLINICA	L SIGNS			
STUDY: 104IP24 DAY 0-DAY 14	GROUP: DOSE:	3-F 110(mg/kg)	SEX:	FEMALE		
ANIMAL # OBSERVATION	NS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
580 Second Cli Decreased Animal Fou Hunched Po Rough Coat	Activity 1 nd Dead sture 1	1	DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	DAY O DAY O DAY O DAY O DAY O	1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

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INDIVIDUAL CLINICAL SIGNS								
STUDY: 104IP2 DAY 0-DAY 14	9.4 GRO DOS	UP: 4-F E: 250	(mg/kg)		SEX:	FEMALE		
ANIMAL #	OBSERVATIONS		SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
586	First Clinical Sign Animal Found Dead				DAY O	DAY 0 DAY 0	1	
587	First Clinical Sign Animal Found Dead				DAY 0 DAY 0	DAY 0 DAY 0	1	
588	Second Clinical Sign Blue Feet 1 Animal Found Dead Hunched Posture 1 Lethargic 1 Rough Coat 1				DAY O DAY O DAY O DAY O DAY O DAY O	DAY O DAY O DAY O DAY O DAY O DAY O	1 1 1 1 1	
589	First Clinical Sign Animal Found Dead				DAY 0 DAY 0	DAY 0 DAY 0	1	
590	First Clinical Sign Animal Found Dead				DAY 0 DAY 0	DAY 0	1	

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	INDIVI	DUAL CLINICA	L SIGNS			
STUDY: 104IP? DAY 0-DAY 14	24 GROUP: DOSE:	5-F 600(mg/kg)	SEX:	FEMALE		
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
596	Second Clinical Sign Decreased Activity 1 Animal Found Dead Rough Coat 1	2	DAY O DAY O DAY O DAY O	DAY O DAY O DAY O DAY O	1 1 1	
597	Second Clinical Sign Decreased Activity 1 Animal Found Dead Rough Coat 1	1	DAY O DAY O DAY O DAY O	DAY O DAY O DAY O	1 1 1	
598	Second Clinical Sign Animal Found Dead Rough Coat 1		DAY 0 DAY 0 DAY 0	DAY O DAY O DAY O	1 1	
599	Second Clinical Sign Animal Found Dead Rough Coat 1		DAY O DAY O DAY O	DAY O	1 1	
600	Third Clinical Sign Blue Feet 2 Decreased Activity 1 Animal Found Dead Hunched Posture 2 Lethargic 2 Rough Coat 1 Rough Coat 2	1	DAY O	DAY O	1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

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	INDIVI	DUAL CLINICAL	SIGNS		••••••	
STUDY: 104IP4 DAY 0-DAY 14	A GROUP: DOSE:	1-F 5(mg/kg)	SEX:	FEMALE		
ANIMAL #	OBSERVATIONS	SEVERITY LO	OC ONSET	DURATION	FREQUENCY	
	Activity Decreased Hunched Posture Hunched Posture 2 Hunched Posture 3 Hormal Normal 1 Rough Coat Rough Coat 3 Scheduled Sacrifice	1	DAY 10 DAY 1 DAY 0 DAY 0 DAY 6 DAY 6 DAY 0 DAY 1 DAY 0 DAY 1	DAY 10 DAY 13 DAY 0 DAY 0 DAY 4 DAY 0 DAY 13 DAY 0 DAY 14	1 6 1 1 1 1 9	
	Activity Decreased Hunched Posture Hunched Posture 2 Hunched Posture 3 Normal Normal 1 Rough Coat Rough Coat 3 Scheduled Sacrifice	1	DAY 10 DAY 11 DAY 0 DAY 0 DAY 4 DAY 0 DAY 1 DAY 0 DAY 1	DAY 10 DAY 13 DAY 0 DAY 0 DAY 0 DAY 6 DAY 0 DAY 13 DAY 0 DAY 14	1 3 1 1 3 1 9 1	
	Hunched Posture Hunched Posture 2 Hunched Posture 3 Normal Normal 1 Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacrifice		DAY 1 DAY 0 DAY 0 DAY 4 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1	DAY 11 DAY 0 DAY 0 DAY 8 DAY 0 DAY 13 DAY 0 DAY 0 DAY 14	3 1 5 1 8 1 1	
	Activity Decreased Hunched Posture Hunched Posture 2 Hunched Posture 3 Normal Normal 1 Rough Coat Rough Coat 3 Scheduled Sacrifice	1	DAY 11 DAY 0 DAY 0 DAY 0 DAY 4 DAY 0 DAY 1 DAY 0 DAY 1	DAY 11 DAY 13 DAY 0 DAY 0 DAY 6 DAY 0 DAY 13 DAY 0 DAY 14	1 6 1 3 1 10 1	·

Severity No.	Description
1	Slight
2	Moderate
3	Severe

ACUTE INTRAPERITONEAL TOXICITY STUDY OF DEAL TOXICITY STUDY OF STUD

INDIVIDUAL CLINICAL SIGNS							
STUDY: 104IP4 DAY 0-DAY 14	A GROUP: DOSE:	1-F 5(mg/kg)	SEX:	FEMALE			
ANIMAL #	OBSERVATIONS	SEVERITY L	LOC ONSET	DURATION	FREQUENCY		
	Hunched Posture Hunched Posture 2 Hunched Posture 3 Normal Normal 1 Rough Coat Rough Coat 3 Scheduled Sacrifice		DAY 1 DAY 0 DAY 0 DAY 4 DAY 0 DAY 1 DAY 0 DAY 1	DAY 11 DAY 0 DAY 0 DAY 6 DAY 0 DAY 13 DAY 0 DAY 14	3 1 1 3 1 10 1		

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U				U

	INDIVI	DUAL CLINICA	L SIGNS			
STUDY: 104IP4 DAY 0-DAY 14	A GROUP: DOSE:	2-F 10(mg/kg)	SEX:	FEMALE		*********
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
	Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Normal Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacrifice		DAY O DAY O DAY O	DAY O DAY O DAY 9 DAY 13 DAY O	6 1 1 1 3 10 1	
	Activity Decreased Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Normal Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1	DAY 10 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 5 DAY 1 DAY 0 DAY 0 DAY 1	DAY 11 DAY 13 DAY 0 DAY 0 DAY 0 DAY 0 DAY 5 DAY 13 DAY 0 DAY 0	2 6 1 1 1 1 1 9 1 1 1	
	Activity Decreased Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Normal Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1	DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 4 DAY 1 DAY 0 DAY 0 DAY 1		5 6 1 1 1 3 6 1 1	
	Activity Decreased Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3	1	DAY 1 DAY 1 DAY 0 DAY 0 DAY 0		6 6 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

ACUTE INTRAPERITONEAL TOXICITY STUDY OF A F

	INDIVI	DUAL CLINICA	AL SIGNS			
STUDY: 104IP4 DAY 0-DAY 14	GROUP: DOSE:	2-F 10(mg/kg)	SEX	FEMALE		
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
465	Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice Activity Decreased Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Normal Rough Coat Rough Coat 1 Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1	DAY 4 DAY 1 DAY 0 DAY 0 DAY 0 DAY 14 DAY 16 DAY 1 DAY 0		3 10 1 1 1 1 1 2 6 1 1 1 3 10 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

	INDIVI	OUAL CLINICAL	SIGNS		•
STUDY: 104IP4 DAY 0-DAY 14	A GROUP: DOSE:	3-F 16.5(mg/kg)	SEX:	FEMALE	
	OBSERVATIONS	SEVERITY LO	C ONSET	DURATION F	REQUENCY
451	Abdomen Bloated Activity Decreased Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1	DAY 7 DAY 11 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1	DAY 7	1 1 11 1 1 1 13 1 1
452	Abdomen Bloated Activity Decreased Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1	DAY 7 DAY 2 DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 1	DAY 8 DAY 11 DAY 13 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 13 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 14	2 3 11 1 1 1 1 13 1 1 1
453	Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice		DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 14	DAY 13 DAY 0 DAY 0 DAY 0 DAY 13 DAY 0 DAY 0 DAY 0 DAY 0 DAY 14	11 1 1 1 13 1 1
454	Hunched Posture Hunched Posture 1 Hunched Posture 2		DAY 1 DAY 0 DAY 0	DAY 13 DAY 0 DAY 0	9 1 1

Severity No.	Description
1	Slight
2	Moderate
3	Severe

		INDIVI	DUAL	CLINICA	L S	IGNS			
STUDY: 104IP DAY 0-DAY 14	4A	GROUP: DOSE:	3-F 16.5	(mg/kg)		SEX:	FEMALE		
ANIMAL #	OBSERVATIONS			SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
455	Hunched Postur Normal Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacr Abdomen Bloate Activity Decre Hunched Postur- Hunched Postur- Hunc	ifice d ased e e 1 e 2 e 3		1		DAY O DAY 5 DAY 1 DAY 0 DAY 0 DAY 0 DAY 14 DAY 7 DAY 10 DAY 10 DAY 1 DAY 0 DAY 1	DAY O DAY 5 DAY 13 DAY O DAY O DAY O DAY 14 DAY 14 DAY 12 DAY D DAY O	1 1 12 1 1 1 1 1 2 2 10 1 1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

	••••••			AFT
INDIVI	DUAL CLINIC	AL SIGNS		56 6 6
STUDY: 104IP4A GROUP: DAY 0-DAY 14 DOSE:	4-F 30(mg/kg)	SEX:	FEMALE	
ANIMAL # OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY
Abdomen Bloated Animal Found Dead Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3		DAY 2 DAY 1 DAY 3 DAY 1 DAY D DAY 0	DAY 2 DAY 2 DAY 3 DAY 2 DAY D DAY 0	1 2 1 2 1 1 1 1 2 1
Abdomen Bloated Blue Feet Activity Decreased Animal Found Dead Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3	1	DAY 1 DAY 7 DAY 2 DAY 7 DAY 1 DAY 0	DAY 7 DAY 7 DAY 2 DAY 7 DAY 7 DAY 0 DAY 0 DAY 0 DAY 0 DAY 7 DAY 0 DAY 7 DAY 0 DAY 7	7 1 1 7 1 1 1 7 1 1 1 1
Abdomen Bloated Activity Decreased Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1	DAY 1 DAY 10 DAY 1 DAY D DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0	DAY 9 DAY 13 DAY 13 DAY D DAY 0 DAY 0 DAY 0 DAY 13 DAY 0 DAY 0 DAY 0 DAY 14	4 3 1D 1 1 1 1 13 1 1 1

Severity No.	Description
1	Slight
2	Moderate
3	Severe

			INDIVID	DUAL CLINICA	L S	IGNS		•
STUDY: 1 DAY 0-DA	04IP4 Y 14	A	GROUP: DOSE:	4-F 30(mg/kg)		SEX:	FEMALE	
AA	NIMAL #	OBSERVATIONS		SEVERITY	LOC	ONSET	DURATION	FREQUENCY
	445	Abdomen Bloated Blue Feet Activity Decree Hunched Posture Hunched Posture Hunched Posture Hunched Posture Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacri Activity Decree Activity Decree Activity Decree Animal Found De Hunched Posture Hunched Posture Hunched Posture Hunched Posture Rough Coat Rough Coat	ased 1 1 2 2 3 3 ifice ased 1 ased 2 and 1 1 ased 2	1 1		DAY 1 DAY 2 DAY 2 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1		9 4 2 13 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		Rough Coat 1 Rough Coat 2 Rough Coat 3				DAY O DAY O DAY O	DAY D DAY O DAY O	1 1 1

Severity No.	Description
1	Slight
2	Moderate
3	Severe

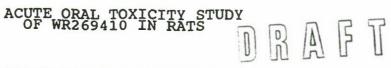


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	INDIVI	DUAL CLINICAL	L SIGNS		
STUDY: 104PO DAY 0-DAY 14	GROUP: DOSE:	1-F 550(mg/kg)	SEX:	FEMALE	
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION F	REQUENCY
606	Ataxia 3 Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Activity Decreased Activity Decreased Activity 3 Hunched Posture Hunched Posture 2 Hunched Posture 3 Lethargic 1 Lethargic 1 Lethargic 2 Normal Rough Coat 1 Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice Third Clinical Sign Blue Feet 1 Blue Feet 2 Comatose 1 Comatose 2	1 2 3	DAY O DAY 1 DAY 0 DAY 0 DAY 3 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0	DAY 0 DAY 3 DAY 0 DAY 0 DAY 0 DAY 0 DAY 2 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 13 DAY 10 DAY 0 DAY 0 DAY 14 DAY 0	1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
608	Animal Found Dead Labored Breathing 1 Labored Breathing 2 Rough Coat 1 Rough Coat 2 Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 1 Comatose 3 Animal Found Dead		DAY O	DAY D DAY O	1 1 1 1 1 1 1 1 1 1 1

Severity No.	Description
1	Slight
2	Moderate
3	Severe



			INDIVII	DUAL	CLINICA	L S	igns			
STUDY: 10 DAY 0-DAY	04P026 7 14	;	GROUP: DOSE:	1-F 550(mg/kg)		SEX:	FEMALE		
ANI	IMAL # 0	BSERVATIONS			SEVERITY	LOC	ONSET	OURATION	FREQUENCY	
60	LLLRRRR RR BBBBCCCCALLLRRRRRRRRRRRRRRRRRRRRRRRRRRRR	abored Breathi abored Breathi abored Breathi ethargic 2 ough Coat 1 ough Coat 3 lue Feet lue Feet 1 lue Feet 2 lue Feet 3 omatose 0 omatose 1 omatose 2 omatose 3 nimal Found De abored Breathi abored Breathi abored Breathi abored Breathi abored Breathi ough Coat ough Coat 1 ough Coat 2 ough Coat 3	ing 2 ing 3				DAY 0 OAY 1 OAY 0 OAY 0 OAY 1 OAY 0	DAY 0 OAY 0 OAY 0 OAY 0 DAY 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
61		irst Clinical nimal Found De					DAY 0 DAY 0	DAY 0 DAY 0	1	



			UAL CLINICA				
STUDY: 104 DAY 0-DAY	P026 14	GROUP: DOSE:	2-F 700(mg/kg)	SEX	: FEMALE		
ANIM	AL # OBSERVATIONS		SEVERITY	LOC ONSET	DURATION	FREQUENCY	
616	Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 1 Comatose 2 Comatose 3 Animal Found [Labored Breat] Labored Breatl Labored Breatl Rough Coat 1 Rough Coat 2 Rough Coat 3	hing 1 hing 2		DAY O	DAY O	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
617	Second Clinica Blue Feet 1 Comatose 1 Animal Found D Labored Breath Rough Coat 1	Dead		DAY O DAY O DAY O DAY O DAY O DAY O		1 1 1 1 1 1 1	
618	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Acti Decreased Acti Decreased Acti Hunched Postur Hunched Postur Hunched Postur Lethargic 3 Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacr	ivity ivity 1 ivity 2 re re 1 re 2 re 3	1 2 2 3	DAY 1 DAY 0 DAY 0 DAY 0 DAY 3 DAY 1 DAY 0	DAY 11 DAY 0 DAY 0 DAY 0	3 1 1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



			INDIVII	DUAL	CLINICA	L S	IGNS			
STUDY: DAY 0-D	104P02 AY 14	:6	GROUP: DOSE:	2-F 700	mg/kg)		SEX:	FEMALE		
	ANIMAL #	OBSERVATIONS			SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
	619	Third Clinical Blue Feet 1 Blue Feet 2 Comatose 1 Comatose 2 Animal Found D Labored Breath Labored Breath Rough Coat 1 Rough Coat 2	ead ing 1				DAY 0	DAY O	1 1 1 1 1 1 1 1 1	
	620	Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 1 Comatose 2 Comatose 3 Animal Found D Labored Breath Labored Breath Labored Breath Rough Coat 1 Rough Coat 2 Rough Coat 3	ing 1 ing 2				DAY 0	DAY 0	1 1 1 1 1 1 1 1 1 1 1 1 1	



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			INDIVI	DUAL	CLINICA	L S	IGNS			
STUDY: DAY 0-	104PO DAY 14	26	GROUP: DOSE:	3-F 900(mg/kg)		SEX:	FEMALE		
	ANIMAL #	OBSERVATIONS			SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
	626	Third Clinical Blue Feet 1 Blue Feet 2 Comatose 1 Comatose 2 Animal Found D Labored Breath Labored Breath Rough Coat 1 Rough Coat 2	ead ing 1				DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	DAY 0	1 1 1 1 1 1 1 1 1	
	627	Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 1 Comatose 2 Comatose 3 Animal Found D Labored Breath Labored Breath Labored Breath Rough Coat 1 Rough Coat 2 Rough Coat 3	ing 1 ing 2				DAY 0	DAY 0	1 1 1 1 1 1 1 1 1 1 1	
	628	Second Clinica Blue Feet 1 Comatose 1 Animal Found D Labored Breath Rough Coat 1	ead				DAY O DAY O DAY O DAY O DAY O DAY O	DAY O DAY O DAY O DAY O DAY O DAY O	1 1 1 1 1	
	629	First Clinical Animal Found D					DAY O	DAY 0 DAY 0	1	
	630	Blue Feet 1 Blue Feet 2					DAY 0 DAY 0	DAY 0 DAY 0	1	

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		INDIVII	DUAL	CLINICA	L S	igns			
STUDY: 104P02 DAY 0-DAY 14	26	GROUP: DOSE:	3-F 900(mg/kg)		SEX:	FEMALE		
ANIMAL #	OBSERVATIONS			SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
	Blue Feet 3 Comatose 1 Comatose 2 Comatose 3 Animal Found D Labored Breath Labored Breath Labored Breath Rough Coat 1 Rough Coat 2 Rough Coat 3	ing 1 ing 2				DAY O DAY O DAY O DAY O DAY 1 DAY O	DAY O	1 1 1 1 1 1 1 1 1	



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		INDIVI	DUAL	CLINICA	. 8:	IGNS			
STUDY: 104PO DAY 0-DAY 14	26	GROUP: DOSE:	4-F 115	(mg/kg)	• • • • •	SEX:	FEMALE)	
ANIMAL #	OBSERVATIONS			SEVERITY	LOC	ONSET	DURATION	FREQUENCY	,
636	Ataxia 2 Ataxia 3 Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Acti Decreased Acti Decreased Acti Animal Found D Hunched Postur Hunched Postur Hunched Postur Lethargic 2 Rough Coat Rough Coat 1 Rough Coat 2	ivitý 1 ivity 3 Dead re re 1 re 2	•	1 3 2		DAY O	DAY O	1 1 3 1 1 5 1 1 1 5 1 1 1 1 5	
637	Rough Coat 3 Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Acti Decreased Acti Decreased Acti Hunched Postur Labored Breath Labored Breath Lethargic 1 Lethargic 2 Normal Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacr Tip of Tail Da	vity vity 3 ee 2 ing 2 ing 3		1 2 3		DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 2 DAY 1 DAY 0 DAY 12 DAY 1 DAY 0 DAY 12 DAY 1 DAY 0 DAY 4	DAY O DAY O DAY O DAY O DAY O DAY 6 DAY O	1 3 1 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

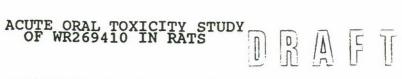


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		INDIVI	DUAL CLINICA	L S	IGNS		***********	
STUDY: 104PO DAY 0-DAY 14	26	GROUP:	4-F 1150(mg/kg)		SEX:	FEMALE		•••••
	OBSERVATIONS		SEVERITY	LOC	ONSET	DURATION	FREQUENCY	******
638	Ataxia Ataxia 2 Ataxia 3 Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Activ Decreased Activ Decreased Activ Animal Found Det Hunched Posture Hunched Posture End Half of Tail Lethargic 2 Rough Coat Rough Coat 1 Rough Coat 2	ity ity 1 ity 3 ad 1 3	1 2 3 3 3		DAY 1 DAY 0		1 1 3 1 1 1 1 1 1 1 5 1 1 2 1 5	
639	Rough Coat 3 Tip of Tail Darl Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 1 Comatose 2 Comatose 3 Decreased Activi Decreased Activi Decreased Activi Dark Material Ar Hunched Posture Labored Breathir Labored Breathir Labored Breathir	ity ity ity round Eyes ng 1 ng 2	1 2 3		DAY 0 DAY 1 DAY 0 DAY 1 DAY 2 DAY 1 DAY 2 DAY 1 DAY 2 DAY 1 DAY 0 DAY 0	DAY O DAY 3 DAY 3 DAY D DAY D DAY O DAY O DAY O DAY O DAY 2 DAY 2 DAY 2 DAY 2 DAY 2 DAY 11 DAY 0 DAY 0 DAY 0	3 1 1 1 1 1 1 1 1 2 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



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	INDIVI	DUAL CLINICA	L S	IGNS			
STUDY: 104P02 DAY 0-DAY 14	GROUP: DOSE:	4-F 1150(mg/kg)		SEX:	FEMALE		-
ANIMAL #	OBSERVATIONS	SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
640	Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice Tip of Tail Darkened			DAY 12 DAY 1 DAY 0 DAY 0 DAY 0 DAY 14 DAY 4	DAY 13 DAY 11 DAY 0 DAY 0 DAY 0 DAY 14 DAY 4	2 11 1 1 1 1	
	Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose Comatose 2 Animal Found Dead Labored Breathing Labored Breathing 1 Labored Breathing 2 Labored Breathing 3 Lethargic 1 Lethargic 1 Lethargic 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3			DAY D DAY D DAY D DAY 1 DAY 0 DAY 2 DAY 1 DAY 0 DAY D	DAY O DAY O DAY D DAY 1 DAY 0 DAY 2 DAY 1 DAY 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	



**********		INDIVI	DUAL	CLINICA	L S	IGNS			
STUDY: 104PO DAY 0-DAY 14	26	GROUP: DOSE:	5-F 1500	(mg/kg)	•••••	SEX:	FEMALE		
ANIMAL #	OBSERVATIONS			SEVERITY		ONSET	DURATION	FREQUENCY	
646	Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 1 Comatose 2 Comatose 3 Animal Found D Labored Breath Labored Breath Labored Breath Labored Breath Labored Breath Rough Coat 1 Rough Coat 2 Rough Coat 3	ead ing 1 ing 2				DAY 0 DAY 0		1 1 1 1 1 1 1 1 1 1	
647	First Clinical Animal Found D					DAY 0 DAY 0	DAY 0	1	
648	Ataxia Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Acti Animal Found D Hunched Postur Labored Breath Lethargic 1 Lethargic 2 Lethargic 3 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3	ead e ing 1		2		DAY 1 DAY D DAY D DAY D DAY D DAY O DAY 1 DAY 4 DAY 1 DAY D DAY 0	DAY 2 DAY 0 DAY 0 DAY 0 DAY 0 DAY 2 DAY 2 DAY 2 DAY 0	2 2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
649	First Clinical Animal Found D					DAY D	DAY 0	1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

		INDIVI	DUAL	CLINICA	L S	IGNS			
STUDY: 104P02 DAY 0-DAY 14	26	GROUP: DOSE:	5-F 1500	(mg/kg)		SEX:	FEMALE		
ANIMAL #	OBSERVATIONS			SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
650	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 2 Blue Feet 3 Comatose Comatose 2 Comatose 3 Animal Found D Labored Breath Labored Breath Labored Breath Lethargic 1 Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3	ing ing 1 ing 2				DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1 DAY 1 DAY 1 DAY 1 DAY 1 DAY 1 DAY 0	DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

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		INDIVI	DUAL CLINICA	L SIGNS			
STUDY: 104 DAY 0-DAY	PO6A 14	GROUP: DOSE:	1-F 150(mg/kg)	SEX:	FEMALE		
 MINA	AL # OBSERVA	TIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
436	Blue Fe Blue Fe Activit Activit Activit Hunched Hunched Hunched Rough C Rough C Rough C	et 1 et 2 y Decreased y Decreased 1 y Decreased 2 y Decreased 3 Posture Posture 1 Posture 2 Posture 3	1 1 1 1	DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1	DAY 0 DAY 10 DAY 0	3 1 1 2 1 1 1 1 4 1 1 5 7	
437	Activity Activity Activity Hunched Hunched Hunched Normal Rough Co Rough Co Rough Co	et 2 et 3 y Decreased y Decreased 1 y Decreased 2 y Decreased 3 Posture Posture 1 Posture 2 Posture 3 pat 1 pat 2	1 1 1 1	DAY D DAY D DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY D DAY D DAY 5 DAY 1 DAY D DAY D DAY D DAY 1	DAY O DAY D DAY O DAY D DAY O DAY D DAY O DAY O DAY O DAY 13 DAY D DAY D DAY D DAY D DAY D	1 1 1 2 1 1 1 2 1 1 1 5 7 1 1 1	
438	Blue Fee			DAY 1	DAY 3	3	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

ACUTE ORAL TOXICITY STUDY OF

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DAY 0 DAY 0

INDIVIDUAL CLINICAL SIGNS

			T4457 4 T1	JOHN CHIMICA	m proup			
STUDY: DAY 0-	104PO DAY 14	6A	GROUP: DOSE:	1-F 150(mg/kg)	SEX:	FEMALE		
	ANIMAL #	OBSERVATIONS		SEVERITY	LOC ONSET	DURATION	FREQUENCY	
		Blue Feet 2 Blue Feet 3 Comatose Activity Decre Activity Decre Activity Decre Activity Decre Activity Decre Activity Decre Animal Found D Hunched Postur Hunched Postur Hunched Postur Labored Breath Rough Coat Rough Coat 2	eased 1 eased 2 eased 3 ead ee 1 ee 2 ee 3	2 3 3 3	DAY O DAY O DAY 1 DAY 3 DAY 0 DAY 1 DAY 0 DAY 0	DAY O DAY O DAY 2 DAY 3 DAY O	1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	439	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Blue Tail Activity Decre Activity Decre Activity Decre Activity Decre Activity Decre Activity Decre Hunched Postur Hunched Postur Hunched Postur Hunched Postur Rough Coat Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacr	ased 1 ased 2 ased 3 ased 3 e e 1 e 2 e 3	1 3 1 1	DAY 1 DAY 0 DAY 0 DAY 0 DAY 1 DAY 2 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0	DAY 2 DAY 0 DAY 0 DAY 0 DAY 2 DAY 3 DAY 1 DAY 0 DAY 13	2 1 1 1 2 2 1 1 1 6 1 1 4 8 1 1	

440 Animal Found Dead

Severity No.	Description
1	Slight
2	Moderate
3	Severe

		AL TOXICITY S 269410 IN RAT			\
	INDIVI	DUAL CLINICAL			
STUDY: 104POO DAY 0-DAY 14	GROUP: DOSE:	2-F 230(mg/kg)	SEX:	FEMALE	
ANIMAL #	OBSERVATIONS	SEVERITY L	OC ONSET	DURATION	FREQUENCY
426	Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 1 Comatose 2 Comatose 3 Animal Found Dead		DAY O DAY O DAY O DAY O DAY O DAY O DAY 1	DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1	1 1 1 1 1 1
427	Blue Feet 1 Comatose 1 Animal Found Dead		DAY O DAY O DAY O	DAY O DAY O DAY O	1 1 1
428	Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 2 Comatose 3 Activity Decreased 1 Animal Found Dead Rough Coat 3	3	DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0	DAY O DAY O DAY O DAY O DAY O DAY O DAY 1 DAY O	1 1 1 1 1 1
429	Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 1 Comatose 2 Comatose 3 Animal Found Dead Rough Coat 1 Rough Coat 3		DAY 0 DAY 1 DAY 0 DAY 0	DAY O	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
430	Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 1 Comatose 2 Comatose 3		DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	DAY O DAY O DAY O DAY O DAY O DAY O	1 1 1 1 1

Severity No.	Description
1	Slight
2	Moderate
3	Severe

WR	269410 IN RAT	rs		AF	T	
INDIVI	DUAL CLINICAI	L SIGNS				
STUDY: 104P06A GROUP: DAY 0-DAY 14 DOSE:	2-F 230(mg/kg)	SEX:	FEMALE			
ANIMAL # OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY		
Animal Found Dead Rough Coat 1 Rough Coat 2 Rough Coat 3		DAY O DAY O DAY O DAY O	DAY O DAY O DAY O DAY O	1 1 1		



CONTRACT 10 A DO		INDIVI	UAL	CLINICA	L S	IGNS		
STUDY: 104PO6 DAY 0-DAY 14	5A	GROUP: DOSE:	3-F 350(mg/kg)		SEX:	FEMALE	
ANIMAL #	OBSERVATIONS	• • • • • • • • • • • • • • • • • • • •		SEVERITY	LOC	ONSET	DURATION	FREQUENCY
416	Blue Feet 1 Comatose 1 Animal Found De Rough Coat 1	ead				DAY O DAY O DAY O DAY O	DAY O DAY O DAY O	1 1 1
417	Animal Found De	ead				DAY 0	DAY 0	1
418	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Blue Tail Activity Decrea Activity Decrea Activity Decrea Activity Decrea Activity Decrea Hunched Posture Hunched Posture Hunched Posture Hunched Posture Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacri	ased 1 ased 2 ased 3 as		1 2 1 1 2		DAY 1 DAY 0 DAY 0 DAY 0 DAY 2 DAY 1 DAY 2 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1 DAY 0 DAY 1	DAY 2 DAY 0	3 1 1 1 1 2 1 1 1 1 1 3 9 1 1 1 1
419	Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 1 Comatose 2 Comatose 3 Animal Found De Rough Coat 1 Rough Coat 2 Rough Coat 3	ead				DAY O	DAY O DAY O DAY O DAY O DAY 1 DAY O DAY 0	1 1 1 1 1 1 1 1 1

Severity No.	Description
1	Slight
2	Moderate
3	Severe



		INDIVII	DUAL CL	INICAL	SIGN	S			
STUDY: 104P067 DAY 0-DAY 14	A	GROUP: DOSE:	3-F 350(mg	/kg)	SE	х:	FEMALE		
ANIMAL #	OBSERVATIONS		SEVE	RITY LO	C ONSE	T	DURATION	FREQUENCY	
	Blue Feet 1 Blue Feet 2 Blue Feet 3 Comatose 1 Comatose 2 Comatose 3 Animal Found D Rough Coat 2 Rough Coat 3	ead			DAY DAY DAY DAY DAY DAY DAY DAY	0 0 0 0 0 1 0	DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0	1 1 1 1 1 1 1	



			INDIVII	DUAL	CLINICA	L SI	GNS			
STUDY: DAY 0-1	104PO DAY 14	5B	GROUP: DOSE:	1-F 40 (n	ıg/kg)		SEX:	FEMALE		
	ANIMAL #	OBSERVATIONS			SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
	756	Blue Feet 1 Blue Feet 2 Blue Feet 3 Hunched Postur Hunched Postur Hunched Postur Hunched Postur Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacr	e 1 e 2 e 3				DAY 0 DAY 0 DAY 1 DAY 0 DAY 6 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 1	DAY 0 DAY 0 DAY 0 DAY 9 DAY 0 DAY 0 DAY 0 DAY 13 DAY 11 DAY 0 DAY 0 DAY 14	1 1 1 4 1 1 1 5 7 1	
	757	Blue Feet 1 Blue Feet 2 Blue Feet 3 Hunched Postur Hunched Postur Hunched Postur Hunched Postur Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacr	e 1 e 2 e 3				DAY 0 OAY 0 DAY 0 DAY 1 DAY 0 OAY 0 DAY 0 DAY 10 DAY 10 DAY 1 DAY 0 DAY 1 DAY 1 DAY 1 DAY 0 DAY 1	DAY 0 OAY 0 DAY 0 DAY 9 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 13 DAY 8 DAY 0 DAY 0 DAY 14	1 1 1 4 1 1 1 1 4 8 1 1 1 1	
	758	Blue Feet 1 Blue Feet 2 Blue Feet 3 Hunched Postur- Hunched Postur- Hunched Postur- Hunched Postur- Hunched Postur- Normal Rough Coat	e 1 e 2				DAY 0 OAY 0 DAY D DAY 1 DAY 0 DAY 0 DAY 0 DAY 8 OAY 1	DAY 0 DAY 0 DAY 0 DAY 9 DAY 0 DAY 0 DAY 0 DAY 13 OAY 6	1 1 1 8 1 1 1 5 6	



	INDIVI	DUAL CLINICA	L SIGNS			
	GROUP: DOSE:	1-F 40(mg/kg)	SEX:	FEMALE		
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
759	Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice Blue Feet Blue Feet 1		DAY 0 DAY 0 DAY 0 DAY 14 DAY 1 DAY 0	DAY 0 DAY 0 DAY 0 DAY 14 DAY 1 DAY 0	1 1 1 1 1	
	Blue Feet 2 Blue Feet 3 Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice		DAY O DAY 1 DAY 0	DAY O DAY O DAY O DAY O DAY O DAY 13 DAY 10 DAY 10 DAY 0 DAY 12 DAY 0 DAY 0 DAY 0 DAY 0	1 1 6 1 1 1 4 8 1 1 1	
760	Blue Feet 1 Blue Feet 2 Blue Feet 3 Hunched Posture Hunched Posture 2 Hunched Posture 3 Normal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice		DAY O DAY O DAY 1 DAY O DAY O DAY O DAY O DAY O DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0	DAY 0 DAY 13 DAY 11 DAY 0 DAY 0 DAY 0 DAY 0 DAY 14	1 1 5 1 1 1 3 10 1 1 1	

ACUTE ORAL TOXICITY STUDY



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		INDIVI	DUAL CLINICA	L SIG	ns			
STUDY: 1041 DAY 0-DAY	P06B 14	GROUP: DOSE:	2-F 80(mg/kg)	S	EX: F	EMALE		
ANIHA	# OBSERVATIONS		SEVERITY	LOC ON	SET	DURATION	FREQUENCY	
766	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Act Decreased Act Decreased Act Hunched Postu Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sac	ivity ivity ivity ivity re re 1 re 2 re 3	1 1 1	DA DA DA DA DA DA DA DA DA DA DA	Y 1	DAY 1 DAY 0 DAY D DAY D DAY 1 DAY 0 DAY 0 DAY 9 DAY 0 DAY 0 DAY 0 DAY 0 DAY 13 DAY 12 DAY 12 DAY D DAY D DAY 12 DAY D DAY 12 DAY D DAY D	1 1 1 1 1 1 1 8 1 1 1 2 11 1 1	
767	Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Blue Tail Decreased Act Decreased Act Decreased Act Hunched Postu Hunched Postu Hunched Postu Hunched Postu Hunched Postu Hornal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sac	ivity ivity ivity re re 1 re 2 re 3	1 1 1	DA'	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	DAY 1 DAY D DAY 12 DAY 13 DAY D	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

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	TUDIATO	AL CHIMICA	n prans			
UDY: 104P06B Y 0-DAY 14	GROUP: 2 DOSE: 8	-F 0(mg/kg)	SEX	FEMALE		
ANIMAL # OBSERVATIONS		SEVERITY	LOC ONSET	DURATION	FREQUENCY	
768 Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Blue Faet 3 Blue Tail Decreased Activ Decreased Activ Hunched Posture Hunched Posture Hunched Posture Hunched Posture Rough Coat Rough Coat Rough Coat 2 Rough Coat 3 Scheduled Sacri	vity vity vity = 1 = 2 = 3	1 1 1	DAY 1 DAY 0	DAY O DAY 1 DAY O DAY O DAY O OAY 7 DAY O DAY O DAY O DAY 13 DAY 12 DAY O DAY O DAY 0	1 1 1 1 1 1 3 1 1 1 5 8 1 1	
769 Blue Feet Blue Feet 1 Blue Feet 2 Blue Feet 3 Decreased Activ Decreased Activ Hunched Posture Hunched Posture Hunched Posture Hunched Posture Hunched Posture Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacri	ritý 2 1 2 2 3	1 1	DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 OAY 3 DAY 0 DAY 1 DAY 0 DAY 0	DAY O	1 1 1 1 1 3 1 1 1 1 4 9 1 1	
770 Blue Feet Blue Feet 1			DAY 1 DAY 0	DAY 1 DAY 0	1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

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	103	101	12	11
U		101	1 }	11

***************************************	INDIVI	DUAL CLINICA	L SIGNS			
STUDY: 104PO6 DAY 0-DAY 14	GROUP: DOSE:	2-F 80(mg/kg)	SEX	: FEMALE		
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
	Blue Feet 2 Blue Feet 3 Decreased Activity Decreased Activity Decreased Activity Hunched Posture Hunched Posture 1 Hunched Posture 2 Hunched Posture 3 Hormal Rough Coat Rough Coat 1 Rough Coat 2 Rough Coat 3 Scheduled Sacrifice	1 1 1	DAY O DAY D DAY D DAY D DAY O	DAY D DAY D DAY O DAY 9 DAY D DAY D DAY 0 DAY 8 DAY 13 DAY D DAY D DAY D	1 1 1 1 1 8 1 1 1 1 1 1 1 1 1 1 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



•		INDIVI	DUAL	CLINICA	L S	IGNS			
STUDY: 104IP DAY 0-DAY 14	26	GROUP: DOSE:	1-F 30(n	ng/kg)		SEX:	FEMALE		•••••
	OBSERVATIONS			SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
656	Blue Feet #1 Blue Feet #2 Blue Feet #3 Decreased Acti Oecreased Acti Hunched Posture Hunched Posture Hunched Posture Rough Coat Rough Coat #1 Rough Coat #2 Rough Coat #3 Scheduled Sacri	e e #2 e #3		1 3 3		DAY O DAY O DAY O DAY O DAY O DAY O DAY 1 DAY O DAY 1 DAY D DAY D DAY D DAY D DAY D DAY D	OAY O DAY O	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
657	Blue Feet Blue Feet #1 Blue Feet #2 Blue Feet #3 Hunched Posture Hunched Posture Lethargic #1 Lethargic #2 Lethargic #3 Normal Rough Coat Rough Coat #2 Rough Coat #3 Scheduled Sacri	e #2 e #3				DAY 1 DAY 0 OAY 0 DAY 0 DAY 1 DAY 0 DAY D DAY 0 DAY 1	DAY 1 DAY 0 DAY 13 DAY 6 DAY 0 DAY 0 DAY 14	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
658	Blue Feet #1 Blue Feet #2 Blue Feet #3 Decreased Activ Hunched Posture			3		DAY D DAY D DAY O DAY O DAY 1	DAY O DAY D DAY O DAY D DAY 3	1 1 1 3	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



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	INDIVI	DUAL CLINICAL	SIGNS			
STUDY: 1041P2 DAY 0-DAY 14	GROUP:	1-F 30(mg/kg)	SEX:	FEMALE		
	OBSERVATIONS		OC ONSET		FREQUENCY	
659	Hunched Posture #2 Hunched Posture #3 Lethargic #1 Lethargic #2 Normal Rough Coat Rough Coat #1 Rough Coat #2 Rough Coat #3 Scheduled Sacrifice Blue Feet Blue Feet		DAY 0 DAY 0 DAY 0 DAY 0 DAY 11 DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 14	DAY O DAY O DAY O DAY 12 DAY 13 DAY O DAY O DAY 14 DAY 1 DAY 1	1 1 1 2 11 1 1 1	
	Blue Feet #2 Blue Feet #3 Decreased Activity #3 Hunched Posture Hunched Posture #2 Hunched Posture #3 Lethargic #1 Lethargic #2 Normal Rough Coat Rough Coat #1 Rough Coat #2 Rough Coat #3 Scheduled Sacrifice	3	DAY O DAY D DAY O DAY O DAY O	DAY O DAY O DAY O DAY D DAY O DAY D DAY D	1 1 1 1 1 1 1 6 7	
660	Blue Feet #1 Blue Feet #2 Blue Feet #3 Decreased Activity #3 Hunched Posture Hunched Posture #2 Hunched Posture #3 Lethargic #1 Lethargic #2 Normal	3	DAY O DAY O DAY O DAY 1 DAY O DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	DAY D DAY O DAY O DAY D DAY 1 DAY D DAY O DAY O DAY O DAY O DAY A	1 1 1 1 1 1 1 1 1 1	

Severity No.	Description				
1	Slight				
2	Moderate				
3	Severe				



		INDIVI	DUAL CLINIC	AL SIGNS			
••••	STUDY: 104 IP26 DAY 0-DAY 14	GROUP: DOSE:	1-F 30(mg/kg)	SEX:	FEMALE		• • • • • • • • • • • • • • • • • • • •
	ANIMAL # OBSERVATIONS		SEVERITY	LOC ONSET	DURATION	FREQUENCY	
	Rough Coat Rough Coat #1 Rough Coat #2 Rough Coat #3 Scheduled Sac			DAY 1 DAY 0 DAY 0 DAY 0 DAY 14	DAY 2 DAY 0 DAY 0 DAY 0 DAY 14	2 1 1 1	



INDIVIDUAL CLINICAL SIGNS STUDY: 104IP26 GROUP: 2-F DOSE: 60 (mg/kg) SEX: FEMALE GROUP: 2-F DOSE: 60 (mg/kg) GROUP: 2-F GROUP:	U
### ANIMAL # OBSERVATIONS SEVERITY LOC ONSET DURATION FREQUENCY	
666 Blue Feet #1	
Blue Feet #2 Blue Feet #3 Blue Feet #3 Blue Feet #3 Decreased Activity Decreased Activity #3 Blue Feet #3 Decreased Activity #3 Blue Feet #3 Blue Fe	
Blue Feet #2 0AY 0 0AY 0 1 Blue Feet #3 DAY 0 0AY 0 1 Decreased Activity 1 DAY 1 0AY 1 1 Hunched Posture 0AY 1 DAY 8 5	
Lethargic #1 Lethargic #2 Lethargic #2 Lethargic #3 Normal Rough Coat Rough Coat #1 Rough Coat #2 Rough Coat #3 Scheduled Sacrifice DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 11 B DAY 0 DA	
668 Blue Feet #1 DAY 0 DAY 0 1 Blue Feet #2 DAY 0 DAY 0 1 Blue Feet #3 DAY 0 OAY 0 1 Decreased Activity 1 DAY 1 DAY 1 1	

Severity No.	Description
1	Slight
2	Moderate
3	Severe



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***************************************		INDIVID	UAL CLIN	ICAL E	IGN8			
STUDY: 104IP: DAY 0-DAY 14	26 (I	GROUP:	2-F 60(mg/kg)	SEX:	FEMALE		, , , , , , , , , , , , , , , , , , , ,
ANIMAL #	OBSERVATIONS					DURATION		
669	Hunched Posture Hunched Posture Hunched Posture Lethargic #1 Lethargic #2 Lethargic #3 Normal Rough Coat Rough Coat #1 Rough Coat #3 Scheduled Sacrif Blue Feet #1 Blue Feet #2 Blue Feet #3 Hunched Posture Hunched Posture Hunched Posture	#2 #3 fice			DAY 1 DAY 0 DAY 0 DAY 0 DAY 0 DAY 0 DAY 10 DAY 10 DAY 1 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 14	DAY 8 DAY 0 DAY 0 DAY 0 DAY 0 DAY 13 DAY 9 DAY 0	5 1 1 1 1 4 8 1 1 1 1 1 1 1 1 1 1	
670	Lethargic #1 Lethargic #2 Lethargic #3 Mormal Rough Coat Rough Coat #1 Rough Coat #2 Rough Coat #3 Scheduled Sacrif Blue Feet #1 Blue Feet #2 Blue Feet #3 Decreased Activi Decreased Activi Hunched Posture Hunched Posture Hunched Posture	ty ty #1 ty #3	1 3 3		DAY 0 DAY 0 DAY 0 DAY 1 DAY 0 DAY 0 DAY 0 DAY 14 DAY 0	DAY O DAY O DAY 12 DAY 13 DAY 0	1 1 6 7 1 1 1 1 1 1 1 1 7	

Severity No.	Description
1	Slight
2	Moderate
3	Severe

	12	57
n	17	

 					الا ك	היים	U
	INDIVI	DUAL CLINICAL	L S	IGNS			
 STUDY: 104IP26 DAY 0-DAY 14	GROUP: DOSE:	2-F 60(mg/kg)		SEX:	FEMALE		
ANIMAL # OBSERVATIONS		SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
Lethargic #2 Normal Rough Coat Rough Coat #1 Rough Coat #2 Rough Coat #3 Scheduled Sacr	rifice			DAY 0 DAY 9 DAY 1 DAY 0 DAY 0 DAY 0 DAY 14	DAY 0 DAY 13 DAY 8 DAY 0 DAY 0 DAY 0 DAY 14	1 4 8 1 1 1	



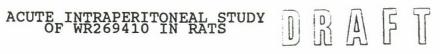
			INDIVII	UAL	CLINICA	L S	IGNS			
STUDY: DAY 0-D	104IP2 AY 14	6	GROUP: DOSE:	3-F 125(mg/kg)		SEX:	FEMA]	LE	•
,	ANIMAL #	OBSERVATIONS			SEVERITY	LOC	ONSET	DURATI	ON FREQUENCY	
	676	Blue Feet #1 Blue Feet #2 Blue Feet #3 Comatose #1 Comatose #2 Comatose #3 Animal Found 0 Labored Breath Labored Breath Labored Breath Rough Coat #1	ing #1 ing #2				DAY O OAY O DAY O DAY O DAY O DAY O DAY 1 OAY O OAY O OAY O	DAY 0 OAY 1 DAY 0 OAY 0 OAY 0	1 1 1 1 1 1 1 1 1	
	677	Rough Coat #2 Rough Coat #3 Blue Feet #1 Blue Feet #2					DAY O DAY O DAY O DAY O	DAY 0 DAY 0 DAY 0 DAY 0	1 1 1	
		Blue Feet #3 Comatose #1 Comatose #2 Comatose #3 Animal Found D	ead				DAY O DAY O DAY O DAY O DAY 1	OAY O OAY O DAY O DAY O OAY 1	1 1 1 1	
		Labored Breath Labored Breath Labored Breath Rough Coat #1 Rough Coat #2 Rough Coat #3	ing #2				DAY O DAY O DAY O DAY O DAY O DAY O	DAY O OAY O DAY O DAY O DAY O DAY O	1 1 1 1 1	
	678	Blue Feet #1 Blue Feet #2 Blue Feet #3 Comatose #1 Comatose #2 Comatose #3 Animal Found D Labored Breath Labored Breath	ing #1				DAY O OAY 1 DAY O DAY O	DAY O OAY O DAY O DAY O DAY O DAY O DAY 1 OAY O DAY O	1 1 1 1 1 1 1	



		INDIVI	DUAL	CLINICA	L S	IGNS			
STUDY: 104IP: DAY 0-DAY 14	26	GROUP: DOSE:	3-F 125((mg/kg)		SEX:	FEMALE		
ANIMAL #	OBSERVATIONS			SEVERITY	LOC	ONSET	DURATION	FREQUENCY	
•••••		ead ing #1 ing #2 ing #3			LOC	DAY O	DURATION DAY 0	FREQUENCY 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	Labored Breath Rough Coat Rough Coat #1 Rough Coat #2					DAY 0 DAY 1 DAY 0 DAY 0	DAY 0 DAY 1 DAY 0 DAY 0	1 1 1	
	Rough Coat #3					DAY 0	DAY 0	1	

	0		F	1
--	---	--	---	---

STUDY: 104IP26								
### ANIMAL # OBSERVATIONS SEVERITY LOC ONSET DURATION FREQUENCY		IN	DIVIDUAL	CLINICAL	SIGNS			
Blue Feet #1	STUDY: 104I DAY 0-DAY 1	P26 GR 4 DO	OUP: 4-F SE: 250	(mg/kg)	SEX:	FEMALE		••••••
Blue Feet #2	ANIMAL	# OBSERVATIONS		SEVERITY	LOC ONSET	DURATION	FREQUENCY	
Comatose #1 Animal Found Dead Labored Breathing #1 Rough Coat #1 688 Blue Feet #1 Blue Feet #2 Blue Feet #3 Comatose #1 Comatose #1 Comatose #2 Comatose #3 Animal Found Dead Labored Breathing #1 DAY 0 DAY 0 1 Comatose #3 Animal Found Dead Labored Breathing #1 Labored Breathing #1 Labored Breathing #1 Labored Breathing #2 Labored Breathing #3 Rough Coat #1 Rough Coat #3 Blue Feet #1 DAY 0 DAY 0 1	686	Blue Feet #2 Blue Feet #3 Comatose #1 Comatose #2 Comatose #3 Animal Found Dead Labored Breathing # Labored Breathing # Labored Breathing # Rough Coat #1 Rough Coat #2	#2		DAY O	DAY O	1 1 1 1 1 1 1 1 1 1 1 1 1	
Blue Feet #2 Blue Feet #3 Blue Feet #4 BAY 0 DAY 0 1 Comatose #1 BAY 0 DAY 0 1 Comatose #3 BAY 0 DAY 0 1 Blue Feet #1 BAY 0 DAY 0 1 Blue Feet #1 BAY 0 DAY 0 1	687	Comatose #1 Animal Found Dead Labored Breathing #	#1		DAY 0 DAY 0 DAY 0	DAY O DAY O	1 1 1 1	
Blue Feet #2 DAY 0 DAY 0 1	688	Blue Feet #2 Blue Feet #3 Comatose #1 Comatose #2 Comatose #3 Animal Found Dead Labored Breathing # Labored Breathing # Labored Breathing # Rough Coat #1 Rough Coat #2	#2		DAY O	DAY O	1 1 1 1 1 1 1 1 1 1 1 1 1	
	689	Blue Feet #2			DAY 0	DAY 0	1	



											2000	
				INDIVI	DUAL	CLINICA	L S	IGNS				
S' Di	TUDY: AY 0-D	104IP2 AY 14	26	GROUP: DOSE:	4-F 250	(mg/kg)		SEX:	FEMALE			
		ANIMAL #	OBSERVATIONS			SEVERITY	LOC	ONSET	DURATION	FREQUENCY		
		69D	Comatose #1 Comatose #2 Comatose #3 Animal Found D Labored Breath Labored Breath Labored Breath Cough Coat #1 Rough Coat #2 Rough Coat #3 Blue Feet #1 Blue Feet #3 Comatose #1 Comatose #1 Comatose #3 Animal Found D Labored Breath Labored Breath Labored Breath Labored Breath Rough Coat #1 Rough Coat #2 Rough Coat #2 Rough Coat #3	ing #1 ing #2 ing #3 ead ing #1 ing #2				DAY O DAY D DAY D DAY O DAY D DAY D DAY D DAY D DAY D DAY O DAY D	DAY D DAY 0 DAY D	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		



			INDIVII	DUAL	CLINICA	AL S	IGNS				
STUDY: DAY 0-D	104IP2 AY 14	6	GROUP: DOSE:	5-F 500(mg/kg)		SEX:	FEMALE		***********	
	ANIMAL #	OBSERVATIONS			SEVERITY	LOC	ONSET	DURATION	FREQUENCY		
	696	Blue Feet #1 Comatose #1 Animal Found D Labored Breath Rough Coat #1					DAY 0 DAY 0 DAY 0 OAY 0 DAY 0	DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	1 1 1 1 1		
	697	Blue Feet #1 Blue Feet #2 Blue Feet #3 Comatose #2 Comatose #3 Animal Found D Hunched Postur Hunched Postur Labored Breath Labored Breath Lethargic #1 Rough Coat #1 Rough Coat #2 Rough Coat #3	e #1 e #2 ing #2				DAY O DAY O DAY O OAY O OAY O DAY O	DAY 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
	698	Blue Feet #1 Comatose #1 Animal Found O Labored Breath Rough Coat #1					DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	DAY 0 DAY 0 DAY 0 DAY 0 DAY 0	1 1 1 1		
	699	Blue Feet #1 Blue Feet #2 Blue Feet #3 Comatose #1 Comatose #3 Animal Found Di Labored Breath Labored Breath Labored Breath Rough Coat #1 Rough Coat #2 Rough Coat #3	ing #1 ing #2				DAY O	DAY O	1 1 1 1 1 1 1 1 1 1 1 1 1		



***************************************	INDIVI	DUAL CLINICA	AL SIGNS			
STUDY: 1041P2 DAY 0-DAY 14	GROUP: DOSE:	5-F 500(mg/kg)	SEX:	FEMALE		
ANIMAL #	OBSERVATIONS	SEVERITY	LOC ONSET	DURATION	FREQUENCY	
700	Blue Feet #1 Comatose #1 Animal Found Dead Labored Breathing #1 Rough Coat #1		DAY O DAY O DAY O DAY O DAY O	DAY O DAY O DAY O DAY O DAY O	1 1 1 1	

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APPENDIX 4

Individual Body Weights and Body Weight Gains



INDIVIDUAL BODY WEIGHTS (Grams)												
STUDY: 104P024	GF DC ANIMAL #	OUP: SE: DAY -3	1-M 10 (mg/ DAY 0	kg) DAY 7	SEX:	MALE						
	491 492 493 494 495 MEAN S.D.	289.2 267.0 268.7 275.8 300.4 280.2 14.27	268.9 263.6 261.2 277.9 304.3 275.2 17.50	307.2 319.2 319.8 340.4 383.7 334.1	297.1 360.7 356.2 378.1 445.8 367.6 53.32							
	N	5	5 Data Unav	5 ailable	5							



	IN	DIVID	UAL BO	DY WE	IGHTS (Gra	ms)	
STUDY: 104P024	GF DC ANIMAL #	OUP: OSE: DAY -3	2-M 15 (mg/ DAY 0	kg) DAY 7	SEX:	MALE	
	496 497 498 499 500	270.4 272.6 281.2 291.5 258.0	272.7 270.2 277.7 287.0 261.3	337.0 287.5 350.3 349.6 317.7	381.2 339.0 485.2 401.0 354.5		
	MEAN S.D. N	274.7 12.51 5	273.8 9.48 5	328.4 26.41 5	392.2 57.23 5		
		:	Data Unav	ailable			



	IND	IVIDU	AL BO	DY WE	IGHTS (Gra	ams)
STUDY: 104P024	GRO	UP: 3- E: 2	-M	la \	SEX:	MALE
		DAY -3	O (mg/)	DAY 7	DAY 14	
	501	267.8	265.4	С	C	
	502	307.5	310.4	C	C	
	503	286.4	284.4	c	c	
	504		278.6	c	c	
	505	263.7	259.5	С	c	
	MEAN	280.5	279.7			
	S.D.	17.45	19.86			
	N	5	5	0	0	
	: Data l	Jnavai labl	le c:	Animal	Found Dead	

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INDIVIDUAL BODY WEIGHTS (Grams)											
STUDY: 10	4P024 GF	ROUP: 4-M OSE: 25(r	~ / lr~ \	SEX:	MALE						
	ANIMAL #	DAY -3 DA	ng/kg) y 0 day 7	DAY 14							
	511	294.4 292	.9 с	С							
	512	287.7 290	.8 c	C							
	513	278.8 277	.7 c	C							
	514	268.1 263		C							
	515	265.2 267		c							
	MEAN	278.8 278	.6								
	S.D.	12.47 13.	18								
	N	5	5 0	0							
		a Unavailable	c: Animal	Found Dead							



	IN	DIVID	DUAL B	ODY WE	IGHTS (Gra	ams)
STUDY: 104P024	GR	QUP:	5-M	/le~\	SEX:	MALE
	ANIMAL #	SE: DAY -3	35 (mg	DAY 7	DAY 14	
		*				
	516	289.3	285.3	С	С	
	517	300.7	299.7	C	С	
	518	264.6	264.6	C	С	
	519	275.6	275.3	C	C	
	520	271.7	277.4	c	c	
	MEAN	280.4	280.5			
	S.D.	14.49	13.05			
	N	5	5	0	0	
	: Data	Unavail	able	c: Animal	Found Dead	



INDIVIDUAL BODY WEIGHTS (Grams)										
STUDY: 104P024	GRO DOS ANIMAL #	UP: 6 E: 5 DAY -3	DAY 0	kg)		MALE				
••••••			• • • • • • • • • • • • • • • • • • • •							
	521	277.5	271.7	C	C					
	522	293.4	295.1	C	C					
	523	272.2	271.1	С	C					
	524	266.5	264.6	c	Č					
	525	286.3	287.2	c	C					
	161	200.3	201.2	-	C					
	MEAN	279.2	277.9							
	S.D.	10.78	12.69		• •					
	N	5	5	0	0					
	: Data	Unavailab	le c	: Animal	Found Dead					



	I	NDIVIDUAL B	ODY WE	IGHTS (Gra	ms)	
STUDY:	104P04A G D ANIMAL#	ROUP: 1-M OSE: 16.5(DAY -2 DAY		SEX: DAY 14	MALE	
	486 487 488 489	374.7 354.5 387.9 360.0 356.3 338.0 347.4 326.6	345.8	c c c		
	490 MEAN S.D. N : Dat	332.9 317.2 359.8 339.3 21.80 18.10 5 5 a Unavailable	2	376.4 386.3 13.93 2 Found Dead		



	IN	DIVIDU	AL B	ODY WE	IGHTS (Grad	ns)
STUDY: 104PO4A	GRO DOS ANIMAL #	DUP: 2 SE: 1 DAY -2	-M 8.0(1 DAY 0	mg/kg) DAY 7	SEX:	MALE
	481		338.3	390.8	438.4	
	482 483	324.5 380.8	302.5	C	C	
	484	398.3	370.9	c	c	
	485	354.5	331.4	C	С	
	MEAN		341.0	390.8	438.4	
	S.D.	27.93	26.98	1	1	
		Unava i labi	le	c: Animal	Found Dead	



INDIVIDUAL BODY WEIGHTS (Grams) STUDY: 104IP24									
DOSE: 20 (mg/kg) ANIMAL # DAY -3 DAY 0 DAY 7 DAY 14 551	***************************************	*********	IND	IVIDUA	L BOI	Y WE	IGHTS (Gran	ns)	
552 264.3 291.3 c c c 5553 278.0 308.0 c c c 5554 297.9 328.7 291.8 352.8 555 270.8 293.3 c c c 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	STUDY:			UP: 1- E: 20 DAY -3	M (mg/k	g) DAY 7		MALE	
: Data Unavailable			552 553 554 555 MEAN S.D.	264.3 278.0 297.9 270.8 278.7 12.77	291.3 308.0 328.7 293.3 305.9 15.01	291.8	352.8 c		
			: Data U	navailable	e c:	Anımat	Found Dead		



	IN	DIVID	UAL BO	DY WE	IGHTS (Gra	ams)
STUDY: 104IP24	GRO DO ANIMAL #	OUP: SE:	2-M 50 (mg/	kg)		MALE
	561	289.9	306.4	С	c	
	562	280.0	300.9	C	c	
	563	298.7	326.3	С	С	
	564	265.1	286.7	С	С	
	565	270.0	296.7	C	C	
	MEAN	280.7	303.4		••	
	S.D.	13.85	14.69			
	N	5	5	0	0	
	: Data	Unavaila	ble c	:: Animal	Found Dead	



	INI	DIVIDU	JAL B	ODY WE	IGHTS (Gran	ms)
STUDY: 104IP24	GRO DOS ANIMAL #	DUP: 3 SE: 1 DAY -3	110 (m	g/kg) DAY 7		MALE
	571	280.6	297.0	C	C	
	572	264.6	292.9	c	C	
	573	267.7	287.3	c	c	
	574	285.9	313.6			
				C	C	
	575	294.9	317.2	С	C	
	MEAN	278.7	301.6		••	
	S.D.	12.63	13.12			
	N	5	5	0	0	
	: Data	Unava i lal	ble	c: Animal	Found Dead	



	IN	DIVIDU	AL B	ODY WE	IGHTS (Gr	ams)	
STUDY: 104IP24	GR	OUP: 4	-M 50 (m	g/kg)	SEX:	MALE	
	ANIMAL #	DAY -3	DAY 0	DAY 7	DAY 14		
	581	285.1	309.1	298.4	348.2		
	582	264.5	280.4	270.4	340.2		
	583	276.7	299.8	C	C		
	584		290.2	c	C		
	585	298.9	324.8	C	C		
	MEAN		300.9	298.4	348.2		
	S.D.	13.94	17.13		• •		
	N	5	5	1	1		
	: Data	Unavailabi	le	c: Animal	Found Dead		



	IND	IVIDU	AL BOI	DY WE	IGHTS (Gran	ns)	
STUDY: 104IP24	GRO	UP: 5	-M	/ls~\	SEX:	MALE	
		DAY -3	DO (mg	DAY 7	DAY 14		
	591	268.2	291.0	С	С		
	592	263.6	288.4	С	С		
	593	276.4	302.8	С	С		
	594	289.0	321.9	С	С		
	595	292.4	316.6	c	С		
	MEAN	277.9	304.1	••	• •		
	S.D.	12.59	14.94		• •		
	N	5	5	0	0		
	: Data l	Unava i labl	le c:	Animal	Found Dead		



	IN	DIVID	UAL BO	DY WE	IGHTS (Gra	ms)
STUDY: 104IP4A	GR DO ANIMAL #	OUP: SE: DAY -2	1-M 5 (mg/k DAY 0	g) DAY 7		MALE
	476 477 478 479 480 MEAN S.D. N	409.1 333.4 350.3 371.5 356.4 364.1 28.60 5	411.1 343.9 356.8 331.2 359.9 360.6 30.45 5	456.5 369.4 389.0 372.1 398.1 397.0 35.31 5	509.9 410.2 421.4 404.2 434.2 436.0 42.88 5	
		:	Data Unav	ailable		



	IN	DIVID	JAL BO	DY WE	IGHTS (Gra	ns)	
STUDY: 104IP4A	GR	OUP: 2	2-M 10(mg/	ka)	SEX:	MALE	
		DAY -2	DAY 0	DAY 7	DAY 14		
	466 467	396.2 342.0	405.2	447.3	473.7		
	468	375.4	356.5 378.8	392.4 419.9	425.0 459.6		
	469	356.3	366.7	410.0	441.6		
v.	470	344.8	351.6	383.0	429.6		
	MEAN	362.9	371.8	410.5	445.9		
	S.D.	22.77	21.41	25.13	20.50		
	N	5	5	5	5		
		:	Data Unav	ailable			



	IN	DIVIDU	JAL B	ODY WE	IGHTS (Gra	ims)		
STUDY: 104IP4A	GR	QUP:	3-M	mg/kg)	SEX:	MALE		
	ANIMAL #	DAY -2	DAY 0	DAY 7	DAY 14			
							*	
	456	355.1	362.7	387.8	423.6			
	457	340.7	344.0	351.4	399.3			
	458	369.0	383.8	348.4	366.4			
	459	356.9	361.4	392.8	439.1			
	460	407.6	419.6	369.0	C			
	MEAN	365.9	374.3	369.9	407.1			
	S.D.	25.40	28.99	20.31	31.69			
	N	5	5	5	4			
	: Data	Unavailal	ble	c: Animal	Found Dead			



	IN	DIVID	JAL B	ODY WE	IGHTS (Gr	ams)	
STUDY: 1041P4A	GR DO ANIMAL #	OUP: 4 SE: 5 DAY -2	30 (mg	/kg) DAY 7	SEX:	MALE	
	446 447 448 449 450 MEAN S.D. N	390.4 351.5 382.8 360.6 328.8 362.8 24.75 5 Unavaital	388.5 347.4 394.1 369.6 334.3 366.8 25.77 5	384.0 c 397.4 c c 390.7 9.47 2 c: Animal	442.5 c 448.4 c c 445.5 4.17 2 Found Dead		



		INDIVI	DUAL BO	DY WE	IGHTS (Gran	ms)	
STUDY:	104P026	GROUP: DOSE:	1-M 550 (mg	r/kg)		MALE	
	ANI	MAL # DAY -	4 DAÝ O	DAY 7	DAY 14		
	60	1 297.9	303.4	338.9	407.7		
	60			311.2	378.9		
	. 60			C	C		
	60			C	č		
	60			308.4	379.0		
	-				51710		
		MEAN 281.5	288.2	319.5	388.5		
		S.D. 12.82		16.86	16.60		
		N 5	5	3	3		
	-	-: Data Unavai	lable c	: Animal	Found Dead		



		INI	DIVIDU	AL BOI	DY WE	IGHTS (Gra	ms)	
STUDY:	104P026	GRO	OUP: 2 SE: 7	-M	/le~\	SEX:	MALE	
		ANIMAL #	DAY -4	00 (mg	DAY 7	DAY 14		
		611	285.8	289.3	312.4	380.3		
		612	251.1	252.2	279.5	341.3		
		613	269.6	275.7	C	C		
		614	282.2	293.5	C	c		
		615	291.3	305.2	331.9	405.3		
		MEAN	276.0	283.2	307.9	375.6		
		S.D.	16.04	20.28	26.48	32.25		
		N	5	5	3	3		
		: Data	Unavailab	le c:	Animal	Found Dead		



	IN	DIVID	UAL BO	DY WE	IGHTS (Gra	ams)
STUDY: 104P026	GR DO ANIMAL #	OUP: SE: DAY -4	3-M 900 (mg DAY 0	/kg) DAY 7		MALE
	621 622	277.6 267.2	250.5 271.5	c	c	
	623 624 625	273.7 288.9 292.2	299.7 304.4 304.5	278.7 c	392.6 c	
	MEAN S.D. N	279.9 10.46 5 Unavaila	286.1 24.18 5	278.7 1	392.6 1 Found Dead	



	IN	DIVID	UAL B	ODY WE	IGHTS (Gra	ms)	
STUDY: 104P026	GR	OUP: SE:	4-M	mg/kg)	SEX:	MALE	
	ANIMAL #	DAY -4	DAY 0	DAY 7	DAY 14		
	/74	204.2	207.0	27/ 4	770.0		
	631	281.2	296.8	274.1	370.0		
	632	289.0	294.9	C	С		
	633	299.7	308.4	C	C		
	634	273.2	280.5	C	C		
	635	262.7	267.2	266.0	340.2		
	MEAN	281.2	289.6	270.1	355.1		
	S.D.	14.22	15.95	5.73	21.07		
	N	5	5	2 .	2		
	: Data	Unavaila	able	_	Found Dead		



	IN	DIVID	UAL BO	DY WE	IGHTS (Gra	ams)	
STUDY: 104P026	GR	OUP:	5-M 1500 (m	~ /le~\	SEX:	MALE	
	ANIMAL #	DAY -4	DAY 0	DAY 7	DAY 14		
	641	274.8	284.5	С	C		
	642	304.6	315.8	С	C		
	643	287.0	290.8	С	С		
	644	277.4	287.7	С	С		
	645	255.5	260.3	c	c		
	MEAN	279.9	287.8				
	S.D.	17.95	19.75				
	N	5	5	0	0		
	: Data	Unavaila	ble c	: Animal	Found Dead		

ACUTE ORAL TOXICITY STUDY OF



	INDIV	DUAL	BODY 1	WEIGHT	S (Gran	ns)
STUDY: 104P06A	GROUP: DOSE: ANIMAL #	2-M 230 DAY -2	(mg/kg)) DAY 14	SEX:	MALE
	431 432 433 434 435 MEAN S.D. N	363.9 338.1 375.5 383.7 354.4 363.1 17.88	28.6 C 413.5 328.7 356.9 48.99 3	c 396.5 c 476.3 405.9 426.2 43.61 3	Dood	



	INDIVI	DUAL	BODY W	WEIGHT	S (Gran	ns)
STUDY: 104PO6A	GROUP: DOSE: ANIMAL #	3-M 350(DAY -2	mg/kg))	SEX:	MALE
	421 422 423 424 425 MEAN	387.3 356.0 365.7 342.2 317.2	c c c c	468.1 c c c c		
	S.D. N : Data Unava	26.19 5 ilable	1 c: Anim	1 al Found (Dead	



	IN	DIVIDU	JAL BO	DY WE	[GHTS (Gra	ms)	
STUDY: 104P06B	GR DO ANIMAL #	OUP: 1 SE: 4 DAY -3	-M 0 (mg/ DAY 0	kg) DAY 7	SEX:	MALE	
	751 752 753 754 755 MEAN S.D. N	180.4 173.9 185.0 197.8 188.9 185.2 8.99	193.3 186.9 195.9 209.1 198.9 196.8 8.17 5	267.7 272.2 282.6 285.9 279.1 277.5 7.47 5	329.7 352.1 355.7 352.2 354.3 348.8 10.78		



	I	NDIVIDUAL BO	DY WEI	GHTS (Gram	s)	
STUDY: 1	L04P06B G ANIMAL #	ROUP: 2-M OSE: 80 (mg/ DAY -3 DAY 0	kg)	SEX:	MALE	
	761 762 763 764 765 MEAN S.D. N	178.9 191.8 184.6 199.0 201.7 212.0 171.1 180.7 194.0 216.9 186.1 200.1 12.09 14.75 5 5	269.7 278.8 257.4 255.1 286.9 269.6 13.63 5	341.5 359.8 293.6 330.6 349.6 335.0 25.51		



	I	NDIVIDUAL B	DDY WEIG	GHTS (Grams	•)	
STUDY: 10	04IP26 G D ANIMAL#	ROUP: 1-M OSE: 30 (mg DAY -3 DAY 0	/kg) DAY 7 I	SEX: 1	MALE	
	651 652 653 654 655 MEAN S.D. N	260.1 281.0 253.7 272.2 251.5 267.8 277.8 297.2 238.8 261.1 256.4 275.9 14.25 13.95 5 5 5 5: Data Una	339.1 287.1 333.7 293.7 311.6 23.54	338.2 390.1 329.3 408.1 347.7 362.7 34.47 5		

	[56]	5	

					L	ש טט ע	N	U	
	IN	DIVID	JAL BO	DY WE	IGHTS (Gra	ns)			
STUDY: 104IP26	GRO DO ANIMAL #	OUP: 2 SE: 6 DAY -3	-M 0 (mg/ DAY 0	kg) DAY 7	SEX:	MALE			
	661 662 663 664 665 MEAN S.D.	258.9 244.7 281.1 242.9 264.4 258.4 15.65	277.0 265.8 301.3 261.0 279.2 276.9 15.63 5	301.2 305.3 331.9 284.0 292.2 302.9 18.18 5	347.9 361.8 382.9 319.1 345.9 351.5 23.38				
			ata Ollavi	a i table					

20		3	7
uu	S	Ш	Ш

	IN	DIVIDU	JAL B	ODY WE	IGHTS (Gra	nms)	
STUDY: 104IP26	GR DO ANIMAL #	OUP: 3 SE: 1 DAY -3	3-M 25 (m DAY 0	g/kg) DAY 7	SEX:	MALE	
	671 672 673 674 675 MEAN S.D. N	252.2 242.1 270.4 253.8 265.4 256.8 11.24 5 Unavailab	274.3 260.2 293.9 270.1 286.9 277.1 13.42 5	298.9 c 321.9 32.46 2 c: Animal	c c 388.4 337.8 c 363.1 35.78 2 Found Dead		



	IN	DIVID	UAL B	ODY WE	EIGHTS (Gr	ams)
STUDY: 104IP26	GR DO ANIMAL #	OUP: SE: DAY -3	4-M 250 (m	g/kg) DAY 7		: MALE
	681 682 683 684 685 MEAN S.D. N	258.5 250.3 228.4 268.8 260.4 253.3 15.38	272.3 269.8 250.7 286.8 276.2 271.2 13.15	296.9 c c 306.0 12.80 2	376.7 343.6 c c 360.2 23.41	
	: Data	Unavail	able	c: Animal	Found Dead	



INDIVIDUAL BODY WEIGHTS (Grams)							
STUDY: 104IP26	GROUP: 5	-M 500 (mg/kg) DAY 0 DAY 7	SEX: M	ALE			
AN	IMAL # DAY -3	DAY 0 DAY /	DAY 14				
6'	91 255.7	276.6 316.3	381.5				
6'	92 251.4	269.4 c	c				
	93 244.1		С				
	94 268.7	264.0 c 282.4 c	c				
	95 269.8	286.4 c	c				
	MEAN 257.9	275.8 316.3	381.5				
	S.D. 11.13	9.18					
	N 5	5 1	1				
	: Data Unavailab	ole c: Animal	Found Dead				



	INDIVI	DUAL V	WEIGHT	GAIN (Gra	ns)
STUDY: 104P024	GROUP: DOSE:	1-M 10 (mg/	/kg)		MALE
	ANIMAL #	DAY 7	DAY 14	TOTAL GAIN	
	491	38.3	-10.1	28.2	
	492	55.6	41.5	97.1	
	493	58.6	36.4	95.0	
	494	62.5	37.7	100.2	
	495	79.4	62.1	141.5	
	MEAN	58.9	33.5	92.4	
	S.D.	14.74	26.50	40.69	
	N	5	5	5	
	·: Data Unavail	able b	o: Schedule	d Sacrifice	

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	INDIVI	DUAL	WEIGHT	GAIN (Gra	ns)
STUDY: 104P024	GROUP: DOSE:	2-M 15 (mg	/kg)	SEX:	MALE
	ANIMAL #	DAY 7		TOTAL GAIN	
	496	64.3	44.2	108.5	
	497 498	17.3 72.6	51.5 134.9	68.8 207.5	
	499	62.6	51.4	114.0	
	500	56.4	36.8	93.2	
	MEAN	54.6	63.8	118.4	
	S.D. N	21.66	40.23 5	52.80 5	
••	: Data Unavail	able	b: Schedule	d Sacrifice	



	INDIVID	UAL	WEIGHT	GAIN (Gran	ns)
STUDY: 104P024	ROUP: 3- DOSE: 20	-M	/kg)		MALE
	ANIMAL #	DAY 7	DAY 14	TOTAL GAIN	
	501	C	С	• •	
	502	С	C		
	503	C	С		
	504	С	C		
	505	С	С	••	
	MEAN	• •		••	
	S.D.	+ -			
	N	0	0	0	
: Da	ita Unavailabl	e	c: Animal	Found Dead	

ACUTE ORAL TOXICITY STUDY



	INDIVIDUA	L W	EIGHT	GAIN (Gran	ns)
STUDY: 104P024	GROUP: 4-N DOSE: 25	(mg/	kg)	SEX:	MALE
	ANIMAL # D	AY 7	DAY 14	GAIN	
					,
	511	C	c		
	512	C	c	• -	
	513	C	c		
	514	C	C	• •	
	515	C	С		
	MEAN				
	S.D.				
	N	0	0	0	
••:	Data Unavailable	c:	Animal	Found Dead	

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	INDIVIDUA	L W	EIGHT	GAIN (Gran	ns)	
STUDY: 104P024	GROUP: 5-M DOSE: 35([mg/]	kg)		MALE	
		AY 7	DAY 14	TOTAL GAIN		
	516	С	С			
	517	C	C	• •		
	518	C	C			
	519	C	C	• •		
	520	C	C			
	MEAN	••		••		
	S.D.					
	N	0	0	0		
•	·-: Data Unavailable	c:	Animal	Found Dead		



	INDIVIDU	AL WEIGHT	GAIN (Grams)	
STUDY: 104P024	GROUP: 6-1 DOSE: 50	M (mg/kg)	SEX: M	ALE
	ANIMAL #	DAY 7 DAY 14	TOTAL GAIN	
	521	с с		
	522 523	c c		
	523	C C		
	524	C C		
	525	СС	• •	
	MEAN			
	S.D.			
	N	0 0	0	
	: Data Unavailable	c: Animal	Found Dead	



	INDIV	IDUAL	WEIGHT	GAIN (Gra	ms)	
STUDY: 104P04A	GROUP: DOSE:	1-M 16.5(mg/kg)		MALE	
	ANIMAL #	DAY	7 DAY 14	TOTAL GAIN		
	486	c	С			
	487	c				
	488	Č	C			
	489	19.2	50.3	69.5		
	490	8.3	50.9	59.2		
	470	0.5	30.7	37.6		
	MEAN	13.8	50.6	64.4		
	S.D.	7.71	0.42	7.28		
	N	2	2	2		
: Data Unavailab	le b:	Scheduled	Sacrifice	c: Animal	Found Dead	

ACUTE ORAL TOXICITY STUDY OF



	•	INDIV	IDUAL	WEIGHT	GAIN (Gra	ns)	
STUDY:	104P04A	GROUP: DOSE:	2-M	mg/kg)	SEX:	MALE	
		DOSE.	10.01	mg/kg/	TOTAL		
					TOTAL		
		ANIMAL #	DAY 7	DAY 14	GAIN		
							 ,
		/91	E2 E	17 1	100 1		
		481	52.5	47.6	100.1		
		482	C	C			
		483	C	C			
		484	С	C			
		485	C	C			
		MEAN	52.5	47.6	100.1		
		S.D.					
		N	1	1	1		
	: Data l	Inavailable b:	Scheduled	Sacrifice	c: Animal	Found Dead	



	INDIV	IDUAL	WEIGHT	GAIN (Gra	ms)		
STUDY: 104I	P24 GROUP: DOSE:	1-M 20(mg	/kg)		MALE	PAGE:	1
	ANIMAL :	DAY 7	DAY 14	TOTAL GAIN			
	551	C	C	• •			
	552	C	C				
	553	С	C	• •			
	554	-36.9	61.0	24.1			
	555	С	C				
	MEAN	-36.9	61.0	24.1			
	S.D.						
	N	1	1	1			
	: Data Unavailable b:	Scheduled	Sacrifice	c: Animal	Found Dead		

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	INDIVIDUA	L WE	EIGHT	GAIN (Gran	ns)		
STUDY: 1041P24	GROUP: 2-M DOSE: 50 ((mg/k	(g)	SEX:	MALE	PAGE:	2
	ANIMAL # D	AY 7	DAY 14	GAIN			
	561	C	C				
	562	C	C				
	563	C	C	* *			
	564	C	C	• •			
	565	C	С				
	MEAN	••					
	S.D.						
	N	0	0	0			
-	-: Data Unavailable	c:	Animal	Found Dead			



	INDIVIDUA	L W	EIGHT	GAIN (Grad	ns)		
STUDY: 104IP24	GROUP: 3-M DOSE: 110	(mg	/kg)	SEX:	MALE	PAGE:	3
	ANIMAL # D	AY 7	DAY 14	GAIN			
				,			
	571	C	С				
	572	C	C				
	573	C	C				
	574	C	C				
	575	С	C				
	MEAN						
	S.D.						
	N	0	0	0			
	: Data Unavailable	c:	Animal	Found Dead			

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	INDIV	IDUAL	WEIGHT	GAIN (Gran	ms)		
STUDY: 1041	P24 GROUP: DOSE:	4-M 250 (m	g/kg)	SEX:	MALE	PAGE:	4
	ANIMAL :	DAY 7	DAY 14	GAIN			
	581	-10.7	49.8	39.1			
	582	С	С				
	583	С	С				
	584	С	С				
	585	С	С				
	MEAN	-10.7	49.8	39.1			
	S.D.						
	N	1	1	1			
	: Data Unavailable b:	Scheduled	Sacrifice	c: Animal	Found Dead		

ACUTE INTRAPERITONEAL TOXICITY



	INDIVIDUA	AL WEI	GHT GAIN (rams)		
STUDY: 104IP24	GROUP: 5-N DOSE: 600	M (mg/k	g)	: MALE	PAGE:	5
	ANIMAL# D	AY 7 DA	TOTAL Y 14 GAIN			
			N/			
	591	С	c			
	592	C	c			
	593	C	c			
	594	C	c			
	595	c	c			
	MEAN					
	S.D.					
	N	0	0 0			
	: Data Unavailable	c: An	imal Found Dead			

			3	7
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	INDIVIDUAL WEIGHT GAIN (Gram	ns)
STUDY: 104IP4A	GROUP: 1-M SEX: DOSE: 5(mg/kg)	MALE
	ANIMAL # DAY 7 DAY 14 GAIN	
	474 454 574 00.0	
	476 45.4 53.4 98.8 477 25.5 40.8 66.3	
	478 32.2 32.4 64.6 479 40.9 32.1 73.0	
	480 38.2 36.1 74.3	
	MEAN 36.4 39.0 75.4	
	S.D. 7.76 8.81 13.73 N 5 5 5	
	: Data Unavailable b: Scheduled Sacrifice	

ACUTE INTRAPERITONEAL TOXICITY STUDY OF



	INDIVII	DUAL W	EIGHT G	AIN (Gra	ns)
STUDY: 104IP4A	GROUP: 2 DOSE: 1	10(mg/ 2-M	kg)	SEX:	MALE
	ANIMAL #	DAY 7	DAY 14	GAIN	
				+	
	466	42.1	26.4	68.5	
	467	35.9	32.6	68.5	
	468	41.1	39.7	80.8	
	469	43.3	31.6	74.9	
	470	31.4	46.6	78.0	
	MEAN	38.8	35.4	74.1	
	S.D.	4.99	7.86	5.56	
	N	5	5	5	
	: Data Unavaila	ble b	: Scheduled	Sacrifice	

ACUTE INTRAPERITONEAL TOXICITY STUDY OF



	INDIV	IDUAL W	VEIGHT	GAIN (Gran	ns)	
STUDY: 104IP4A	GROUP: DOSE:	3-M 16.5(n	ng/kg)		MALE	
	ANIMAL #	DAY 7	DAY 14	TOTAL GAIN		
	456	25.1	35.8	60.9		
	457 458	7.4 -35.4	47.9 18.0	55.3 -17.4		
	459	31.4	46.3	77.7		
	460	-50.6	c			
	MEAN S.D.	-4.4 36.70	37.0 13.76	44.1		
: Data	Unavailable b:	5 Scheduled S	4 Sacrifice	c: Animal	Found Dead	



	INDIV	IDUAL	WEIGHT	GAIN (Gran	ms)	
STUDY: 104I	P4A GROUP: DOSE:	4-M 30(mg	/kg)		MALE	
	ANIMAL :			TOTAL GAIN		
	446	-4.5	58.5	54.0		
	447 448	3.3	51.0	54.3		
	449	3.3 c	S1.0			
	450	С	С			
	MEAN S.D.	-0.6 5.52	54.8 5.30	54.2 0.21		
	N	2	2	2		
	: Data Unavailable b:	Scheduled	Sacrifice	c: Animal	Found Dead	



INDIVIDUAL BODY WEIGHTS (Grams)							
STUDY:	104P06B	GROUP:	3-M	SEX	K: MALE		
	ANIMAL	DOSE: 1	DAY 0 D	Y 7 DAY 14			
		400 7	400 4 04	7. 7.0			
	771	182.3		312.9			
	772 773	177.1	192.9 27 191.7 27				
	774	191.9 200.3	191.7 27 209.3 26				
	775	179.4	189.5 26				
	115	1/9.4	109.5 20	320.2			
	MEA	N 186.2	194.6 26	3.0 329.3			
	S.D			50 15.77			
	N	5	5	5 5			
: Data Unavailable							



	INDIV	IDUAL	WEIGHT	GAIN (Gra	ms)	
STUDY: 104P	O26 GROUP: DOSE:	1-M 550(m	g/kg)		MALE	
	ANIMAL	# DAY 7	DAY 14	TOTAL GAIN		
	/04	75.5	(0.0	40/ 7		
	601 602	35.5 23.3	68.8 67.7	104.3 91.0		
	603	c	C			
	604	C	C	404.0		
	605	31.2	70.6	101.8		
	MEAN	30.0	69.0	99.0		
	S.D.	6.19	1.46	7.07		
	N .	3	3	3		
	: Data Unavailable b:	Scheduled	Sacrifice	c: Animal	Found Dead	

ACUTE ORAL TOXICITY STUDY



		INDIV	IDUAL	WEIGHT	GAIN (Gra	ms)	
STUDY:	104P026	GROUP: DOSE:	2-M 700(m	ıg/kg)		MALE	
		ANIMAL :			TOTAL GAIN		
		611 612 613 614 615	23.1 27.3 c c 26.7	67.9 61.8 c c	91.0 89.1 100.1		
	: Data l	MEAN S.D. N Unavailable b:	25.7 2.27 3 Scheduled	67.7 5.80 3 Sacrifice	93.4 5.88 3 c: Animal	Found Dead	



		I	NDIV	IDUAL	WEIGHT	GAIN (Gra	ms)		
STUDY: 104PO	26	GRO DOS	OUP:	3-M 900(m	ıg/kg)		MALE		
		AN	IMAL #			TOTAL GAIN			
		6	21	С	C				
		6	22	С	С				
		6	23	C	C				
		6	24	-25.7	113.9	88.2			
			25	С	С				
			MEAN	-25.7	113.9	88.2			
			S.D.						
			N	1	1	1			
	: Data	Unavailable	b:	Scheduled	Sacrifice	c: Animal	Found Dea	d	

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***************************************	INDI	VIDUAL W	EIGHT	GAIN (Gran	ns)	
STUDY: 104PC	026 GROUP DOSE:	4-M 1150(m	ng/kg)		MALE	
	ANIMAL	# DAY 7	DAY 14	TOTAL GAIN		
	631	-22.7	95.9	73.2		
		-22.1				
	632	С	С	• •		
	633	С	C	• •		
	634	C	С			
	635	-1.2	74.2	73.0		
	MEAN		85.1	73.1		
	S.D.	15.20	15.34	0.14		
	N	2	2	2		
	: Data Unavailable b	Scheduled S	Sacrifice	c: Animal	Found Dead	



	INDIVIDU	AL V	VEIGHT	GAIN (Gra	ms)	
STUDY: 104P026	GROUP: 5-1 DOSE: 15	M 00 (n	ng/kg)	SEX:	MALE	
		(-	3137	TOTAL		
	ANIMAL #	DAY 7	DAY 14	GAIN		
	641					
	041	С	С			
	642	C	C			
	642 643	C	C			
	644	C	С			
	645	C	C	••		
	MEAN					
	S.D.					
	N	0	0	0		
:	Data Unavailable			Found Dead		



INDIVIDUAL WEIGHT GAIN (Grams)										
STUDY: 104P06	GROUP: DOSE:	2-M 230(m	ng/kg)		MALE					
	ANIMAL	# DAY	7 DAY 14	TOTAL GAIN						
	431	C	C							
	432	5.5	67.9	73.4						
	433									
	434	41.9	62.8	104.7						
	435	-16.3	77.2	60.9						
	MEAN	10.4	69.3	79.7						
	S.D.	29.40	7.30	22.56						
	N	3	3	3						
:		Scheduled	Sacrifice	c: Animal	Found Dead	-				



	INDIV	/IDUAL	WEIGHT	GAIN (Gra	ams)	
STUDY: 104PO	6A GROUP: DOSE:	3-M 350(m	ıg/kg)	SEX:	MALE	
	ANIMAL	_		TOTAL GAIN		
	421	48.0	55.6	103.6		
	422	C	C	• •		
	423	С	С			
	424	C	C			
	425	c	c			
	MEAN	48.0	55.6	103.6		
	S.D.					
	N	1	1	1		
-	-: Data Unavailable b:	Scheduled	Sacrifice	c: Animal	Found Dead	



 		INDIV	IDUAL W	EIGHT (GAIN (Gran	ns)		
STUDY:	104PO6B	GROUP: DOSE:	1-M 40 (mg/	kg)	SEX: TOTAL GAIN	MALE		
 		***************************************					 •	
		751 752	74.4 85.3	62.0 79.9	136.4 165.2			
		753 754	86.7 76.8	73.1 66.3	159.8 143.1			
		755 MEAN	80.2 80.7	75.2 71.3	155.4			
		S.D.	5.30	7.14	11.93			
	:	Data Unavail	lable b	: Scheduled	Sacrifice			

ACUTE ORAL TOXICITY STUDY



	INDIV	IDUAL	WEIGHT	GAIN (Gran	ns)
STUDY: 104P06B	GROUP: DOSE:	2-M 80 (mg	/kg)		MALE
	ANTMAL #			TOTAL	
	ANIMAL #	DAY 7	DAT 14	GAIN	
	7/4	77.0	74 0	440 7	
	761 762	77.9 79.8	71.8 81.0	149.7 160.8	
	763	45.4	36.2	81.6	
	764	74.4	75.5	149.9	
	765	70.0	62.7	132.7	
	MEAN	69.5	65.4	134.9	
	S.D.	13.98	17.65	31.47	
	N	5	5	5	
••	: Data Unavai	lable	b: Schedule	ed Sacrifice	



	INDIV	IDUAL W	VEIGHT	GAIN (Grad	ns)
STUDY: 104P06B	GROUP: DOSE:	3-M 150 (mg	g/kg)		MALE
	ANIMAL #	DAY 7	DAY 14	TOTAL GAIN	
	771	71.1	52.2	123.3	
	772 773	84.9 78.7	71.4 71.3	156.3 150.0	
	774 775	55.5 76.6	51.6 60.1	107.1 136.7	
	MEAN	73.4	61.3	134.7	
	S.D.	11.14	9.75	19.98	
	-: Data Unavai	lable b	: Schedule	d Sacrifice	



	INDIV	DUAL	WEIGHT	GAIN (Grad	ms)	
J						
STUDY: 104IP26	GROUP: DOSE:	1-M 30 (mg	/ka)	SEX:	MALE	
	DODE.	30 (mg	/19/	TOTAL		
	ANIMAL #	DAY 7	DAY 14	GAIN		
	45.4					
	651	23.4	33.8	57.2		
	652	66.9	51.0	117.9		
	653	19.3	42.2	61.5		
	654	36.5	74.4	110.9		
	655	32.6	54.0	86.6		
	033	32.0	34.0	00.0		
	MEAN	35.7	51.1	86.8		
	S.D.	18.73	15.25	27.68		
	N	5	5	5		
:	Data Unavail	lable	b: Schedule	d Sacrifice		



	INDIV	DUAL 1	WEIGHT	GAIN (Gra	ns)
STUDY: 104IP26	GROUP: DOSE:	2-M 60(mg	/kg)		MALE
	ANIMAL #	DAY 7	DAY 14	TOTAL GAIN	
	661	24.2	46.7	70.9	
	662	39.5	56.5	96.0	
	663	30.6	51.0	81.6	
	664	23.0	35.1	58.1	
	665	13.0	53.7	66.7	
	MEAN	26.1	48.6	74.7	
	S.D.	9.81	8.37	14.62	
	N	5	5	5	
	: Data Unavail	able	o: Scheduled	Sacrifice	



	INDI	/IDUAL	WEIGHT	GAIN (Gra	ms)	
STUDY: 104IP2	GROUP:	3-M 125(m	ıg/kg)		MALE	
	ANIMAL	# DAY	7 DAY 14	TOTAL GAIN		
	474					
	671	С	С			
	672	C	C			
	673	50.9	43.6	94.5		
	674	28.8	38.9	67.7		
	675	С	С			
	MEAN		41.3	81.1		
	S.D.	15.63	3.32	18.95		
	N	2	2	2		
	: Data Unavailable b:	Schedul ed	Sacrifice	c: Animal	Found Dead	



]	NDIV	IDUAL	WEIGHT	GAIN (Gra	ms)	
STUDY: 10	04IP26 GF	ROUP:	4-M 250(m	g/kg)	SEX:	MALE	
	ı	ANIMAL #			TOTAL GAIN		
		681					
		682 683	45.2 46.2	61.7 46.7	106.9 92.9		
		684 685	c	c	••		
		MEAN	45.7	54.2	99.9		
		S.D.	0.71	10.61	9.90		
	: Data Unavailable	b:	Scheduled	Sacrifice	c: Animal	Found Dead	



		INDIV	IDUAL	WEIGHT	GAIN (Gra	ms)	
STUDY: 104I	P26	GROUP: DOSE:	5-M 500 (m	ıg/kg)		MALE	
		ANIMAL #	DAY	7 DAY 14	TOTAL GAIN		
		691	39.7	65.2	104.9		
		692	С	С			
		693	С	С			
		694	С	С			
		695	C	С			
		MEAN	39.7	65.2	104.9		
		S.D.					
		N	1	1	1		
	: Data Unavaila	ble b:	Schedul ed	Sacrifice	c: Animal	Found Dead	

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	IND	IVIDUAL BO	DDY WEI	GHTS (Gran	ns)	
STUDY: 104P0	24 GRC DOS ANIMAL #	UP: 3-F SE: 20 (mg/ DAY -3 DAY 0	/kg) DAY 7	SEX: DAY 14	FEMALE	
	506 507 508 509 510 MEAN S.D. N	206.1 205.1 222.7 210.8 192.3 190.5 190.0 181.6 211.1 205.1 204.4 198.6 13.57 12.12 5 5	234.2 233.2 229.1 195.7 232.7 225.0 16.48 5 vailable	356.0 264.8 240.4 230.5 257.5 269.8 50.04		



	IN	DIVID	UAL BO	DY WE	IGHTS (Gra	ms)
STUDY: 104P024	GR	QUP:	6-F	lr~\	SEX:	FEMALE
	ANIMAL #	SE:	50 (mg/	DAY 7	DAY 14	
••••••				• • • • • • • • •		•••••••••••
	526	201.5	197.7	218.2	242.7	
	527	191.0	188.4	198.1	219.3	
	528	211.9	201.2	223.9	250.6	
	529	222.7	215.5	241.6	210.8	
	530	197.8	198.8	227.8	263.2	
	MEAN	205.0	200.3	221.9	237.3	
	S.D.	12.46	9.78	15.87	21.81	
	N.	5	5	5	5	
		:	Data Unav	ailable	95	



	IN	DIVIDUAL	BODY WE	IGHTS (Gran	ns)
STUDY: 104P024	GR DO ANIMAL #	OUP: 7-F SE: 110 DAY -3 D	E D(mg/kg) DAY 0 DAY 7	SEX: DAY 14	FEMALE
	531 532 533 534 535 MEAN S.D.	181.5 17 209.8 19 204.8 19 200.6 19	27.2 216.0 27.5 169.7 27.5 155.8 27.9 c 26.3 215.8 24.9 189.3 1.55 31.21	249.9 227.7 c 240.6 239.4 11.15	
	: Data	Unavailable	c: Animal	Found Dead	

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INDIVIDUAL BODY WEIGHTS (Grams)									
STUDY: 104P024	GR	OUP: SE: DAY -3	B-F	/ka)	SEX:	FEMALE			
	ANIMAL #	DAY -3	DAY 0	DAY 7	DAY 14				
	536	219.8	210.0	C	C				
	537	189.2	189.3	155.7	198.4				
	538	198.8	189.9	С	С				
	539	205.3	207.2	С	С				
	540	207.6	199.8	С	c				
	MEAN	204.1	199.2	155.7	198.4				
	S.D.	11.29	9.56						
	N	5	5	1	1				
	: Data	Unavaila	ble c	: Animal	Found Dead				



	IN	DIVID	UAL BO	DY WE	IGHTS (Gra	ms)	
STUDY: 104P024	GR DO ANIMAL #	OUP: SE: DAY -3	9-F 600 (mg	/kg) DAY 7	SEX: DAY 14	FEMALE	
			=				
	541	227.5	214.7	C	C		
	542	191.4	188.5	C	C		
	543	209.9	203.3	C	С		
	544	206.4	205.5	c	c		
	545	198.0	201.3	č	c		
	242	190.0	201.3	C	C		
	MEAN	206.6	202.7	••			
	S.D.	13.72	9.43				
	N	5	5	0	0		
	: Data	Unavaila	able c		Found Dead		



	IND	IVIDUAL BO	DY WE	IGHTS (Gran	ns)	
STUDY: 104IP24	GROU DOS ANIMAL #	UP: 1-F E: 20(mg/ DAY -3 DAY 0	kg) DAY 7		FEMALE	
	557 558 559 560 MEAN	195.0 204.1 188.3 204.4 216.5 224.4 210.8 230.0 206.8 220.7 203.5 216.7 11.58 11.86 5 5 navailable c	215.3 c 218.3 216.8 2.12 2 2 Animal	241.4 c 263.9 252.7 15.91 2 Found Dead	,	



	IN	DIVID	UAL BO	DY WE	IGHTS (Gra	ams)
STUDY: 104IP24		OUP: SE:	2-F 50(mg/	kg)		FEMALE
	ANIMAL #	DAY -3	DAY 0	DAY 7	DAY 14	
	566	213.4	215.4	С	c	
	567	180.2	195.0	c	С	
	568	204.8	218.8	C	С	
	569	217.9	227.6	С	C	
	570	197.8	205.2	C	С	
	0.200					
	MEAN	202.8	212.4			
	S.D.	14.83	12.61			
	N	5	5	0	0	
	: Data	Unavaila	able c	: Animal	Found Dead	



	IN	DIVIDU	AL BO	DDY WE	IGHTS (Gra	ms)
STUDY: 104IP24	GR	OUP: 3	-F	. / / / / / / / / / / / / / / / / / / /	SEX:	FEMALE
	ANIMAL #	SE: 1:	DAY 0	g/kg) DAY 7	DAY 14	
	576	219.8	232.6	C	C	
	577	201.7	210.7	C	С	
	578	197.4	213.3	С	C	
	579	180.8	184.4	c	C	
	580	213.2	215.0	C	С	
	MEAN	202.6	211.2			
	S.D.	15.09	17.29			
	N	5	5	0	0	
	: Data	Unavailabl	le c	:: Animal	Found Dead	



	IN	DIVID	UAL B	ODY WE	IGHTS (Gra	ms)
STUDY: 104IP24	GR DO	OUP: SE:	4-F 250 (m	g/kg) DAY 7	SEX:	FEMALE
	ANIMAL #	UAT -3	DATU	DAY /	UAY 14	
	586	204.4	219.3	С	C	
	587	220.0	228.5	CCC	C	
	588	196.8	208.6	C	C	
	589	187.4	188.5	C	C	
	590	214.6	229.0	C	C	
	MEAN	204.6	214.8			
	MEAN					
	S.D.	13.17	16.88			
	N	5	5	0	0	
	: Data	Unavail	able	c: Animal	Found Dead	

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		IN	DIVID	UAL BO	DY WE	IGHTS (Gra	ms)	
STUDY:	104IP24	GR	OUP:	5-F	/ka)	SEX:	FEMALE	
		ANIMAL #	DAY -3	600 (mg	DAY 7	DAY 14		
		F0/	245 7	224 0				
		596	215.3	221.0	C	С		
		597	200.8	210.9	C	C		
		598	193.2	208.8	С	C		
		599	191.0	195.0	С	C		
		600	211.7	218.0	С	C		
		MEAN	202.4	210.7				
		S.D.	10.84	10.12				
		N	5	5	0	0		
		: Data	Unavaila	ble c	-	Found Dead		

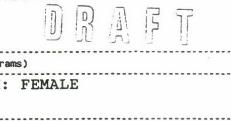
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INDIVIDUAL BODY WEIGHTS (Grams)											
CMIDY, 104TD43	CT	OIID.	1 _ 17		CEV.	FEMALE					
STUDY: 104IP4A	DC.	OUP:	1-F 5(mg/k	(a)	PEV:	LEMATIC					
	ANIMAL #	DAY -2	DAY O	DAY 7	DAY 14						
						•••••					
	471	248.7	248.6	262.8	273.2						
	472	263.3	265.6	270.4	282.2						
	473	233.5	231.1	250.1	255.0						
	474	224.6	231.6	244.8	257.3						
	475	202.9	207.0	224.0	237.2						
	MEAN	234.6	236.8	250.4	261.0						
	S.D.	23.07	21.89	17.90	17.42						
	N	5	5	5	5						
		:	Data Unav	ailable							

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	IN	DIVIDU	JAL BO	DY WE	I GHTS (Gran	ns)	 	
STUDY: 104IP4A	GR DO	OUP: 2	2-F	ka)	SEX:	FEMALE		
	ANIMAL #	DAY -2	DAY O	kg) DAY 7	DAY 14		 	
	//4	2/1.0	27/ 4	257.7	270 0			
	461 462	241.9 240.2	234.1 239.1	257.7 252.0	278.0 270.5			
	463 464	266.6 206.4	268.3 211.0	289.2 222.1	306.0 231.4			
	465	221.5	215.5	237.2	244.9			
	MEAN	235.3	233.6	251.6	266.2			
	S.D. N	22.76	22.76 5	25.14 5	29.18			
		:	Data Unavi	ailable				

		WR24	12511	IN RA	ľS		RA	ß	Ţ			
	INDIVIDUAL BODY WEIGHTS (Grams)											
STUDY: 104IP4A	GR DO ANIMAL#	OUP: SE: DAY -2	3-F 16.5 (m DAY 0	g/kg) DAY 7	SEX DAY 14	: FEMALE						
	451 452 453 454 455 MEAN S.D.	237.9 215.1 226.6 265.9 254.1 239.9 20.45	239.4 212.3 231.7 262.6 253.7 239.9 19.59 5	260.8 218.2 253.8 285.2 279.9 259.6 26.54 5 ailable	269.7 229.4 262.6 300.5 285.3 269.5 26.77							



	IN	DIVIDU	AL BC	DDY WE	IGHTS (Gra	ams)	
STUDY: 104IP4A	GRO DO ANIMAL #	OUP: 4 SE: 3	-F 0 (mg/	kg)		FEMALE	
	ANIMAL #	UAT -2	DATO	DAT 7	UAT 14		
	441 442 443 444 445	245.2 266.0 215.2 236.3 223.8	244.2 263.0 207.5 234.7 230.8	211.6 229.9 239.6 c	c c 249.4 257.3 c		
	MEAN S.D. N : Data	237.3 19.73 5 Unavailab	236.0 20.23 5 ole c	227.0 14.22 3 :: Animal	253.4 5.59 2 Found Dead		



		IN	DIVID	UAL B	ODY WE	IGHTS (Gra	ams)	
 STUDY:	104P026	DO	OUP:	1-F 550(m	g/kg) DAY 7	SEX:	FEMALE	
 		ANIMAL #	DAY -4	DAY	DAY 7	DAY 14		
		606	190.0	190.7	207.5	229.5		
		607	179.8	179.7	201.5	227.5		
		608	209.3	222.5				
					С	C		
		609	199.8	208.1	С	C		
		610	213.3	220.5	С	С		
		MEAN	198.4	204.3	207.5	229.5		
		S.D.	13.78	18.70				
		N	5	5	1	1		
			Unavaila	ble	c: Animal	Found Dead		



			INI	DIVIDU	JAL B	ODY WE	IGHTS (G	rams)	
ST	UDY:	104P026	GRO DOS ANIMAL #	DUP: 2 SE: 7 DAY -4	2-F 700 (m DAY 0	g/kg) DAY 7	SEX DAY 14	: FEMALE	
			616 617 618 619 620 MEAN S.D.	205.0 185.4 197.3 215.9 193.3 199.4 11.63	207.0 179.9 194.1 217.6 192.1 198.1 14.51	200.2	232.2 c c		•••••
			N : Data	Unava i lai	ble	c: Animal	Found Dead		



	IN	DIVID	UAL BO	DY WE	IGHTS (Gra	ims)	
STUDY: 104P026	GR	OUP:	3-F 900(mg	/ka)	SEX:	FEMALE	
	ANIMAL #	DAY -4	DAY 0	DAY 7	DAY 14		
	/2/	200.7	205 5		_		
	626	208.7	205.5	С	С		
	627	188.8	187.0	C	С		
	628	191.5	198.7	C	C		
	629	198.5	197.4	C	C		
	630	214.6	208.3	C	C		
	MEAN	200.4	199.4				
	S.D.	11.04	8.29				
	N	5	5	0	0		
	: Data	Unavaila	ble c	: Animal	Found Dead		



	I	NDIVID	UAL BO	DDY WE	IGHTS (Gra	ams)	
STUDY: 104P026	G	ROUP:	4-F 1150(r	ng/kg)	SEX:	FEMALE	
	ANIMAL #	DAY -4	DAY 0	DAY 7	DAY 14		
	636	203.9	203.3	С	C		
	637	219.2	225.7	229.4	282.6		
	638	196.9	195.5	C	C		
	638 639	184.3	186.8	187.3	220.1		
	640	207.3	214.1	c	С		
	MEAN	202.3	205.1	208.4	251.4		
	S.D.	12.91	15.29	29.77	44.19		
	N	5	5	2	2		
	: Da	ta Unavaila	ble o	c: Animal	Found Dead		



INDIVIDUAL BODY WEIGHTS (Grams)									
STUDY: 104P026	GR DO ANIMAL#	OUP: 5 SE: 1 DAY -4	-F 500 (m	ng/kg) DAY 7	SEX:	FEMALE			
	646	220.7	224.7	с	c				
	647	189.3	191.6	С	c				
	648 649	210.0 201.0	215.0	c	c				
	650	194.8	195.3	c	С				
	MEAN	203.2	205.1						
	S.D. N	12.46	14.11	0	0				
		Unavailat	ole c		Found Dead				



		INDIVI	DUAL	BODY V	VEIGHT	S (Gran	ns)
STUDY:	104P06A	GROUP: DOSE: ANIMAL #	150 (mg/kg)	1	SEX:	FEMALE
		/7/	2/7 /	240.4			
		436	243.4	249.1	272.7		
		437	220.1	235.8	248.2		
		438	235.6	C	C		
		439	227.8	252.4	282.7		
		440	274.5	С	С		
		MEAN	240.3	245.8	267.9		
		S.D.	21.01	8.79	17.75		
		N	5	3	3		
		: Data Unava	ilable	c: Anim	at Found I	Dead	



INDIVIDUAL BODY WEIGHTS (Grams)										
STUDY: 104PO6A	GROUP: DOSE: ANIMAL #	2-F 230(DAY -2	mg/kg) DAY 7 D	AY 14	SEX:	FEMALE				
	426	237.2	С	С						
	427	245.7	С	C						
	428	227.8	C	C						
	429	215.8	С	C						
	430	269.4	С	С						
	MEAN	239.2								
	S.D.	20.22								
	N	5	0	0						
	: Data Unava	ilable	c: Animal	Found [Dead					



	INDIVI	DUAL	BODY W	VEIGHT	CS (Grams)
STUDY: 104P06A	GROUP: DOSE: ANIMAL #	3-F 350(DAY -2	(mg/kg)	DAY 14	SEX: FEMALE
	417 418 419 420 MEAN	241.8 214.3 227.1 246.4 266.2 239.2 19.71	c	254.0 c c	
	N : Data Unavai	5 lable	1 c: Anima	1 al Found D	Dead



	IN	DIVID	UAL BO	DY WE	IGHTS (Gra	ms)	
STUDY: 104P06B	GR	OUP:	1-F 40(mg/	ka)	SEX:	FEMALE	
	ANIMAL #	DAY -3	DAY 0	DAY 7	DAY 14		
	T	450.5	4/0 5	400.0			
	756 757	158.5 146.5	160.5 148.6	188.2 186.0	220.8		
	758	172.3	174.9	212.3	242.7		
	759	173.4	174.5	203.5	233.8		
	760	165.1	171.2	215.5	247.8		
	MEAN	163.2	165.9	201.1	231.8		
	S.D.	11.08	11.31	13.54	14.29		
	N	5	5	5	5		
		:	Data Unav	ailable			

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					IGHTS (Grad	ns)	
STUDY: 104P06B	GR DO ANIMAL #	OUP: 3 SE: 8 DAY -3	2-F 30 (mg/	kg) DAY 7	SEX:	FEMALE	
	766 767 768 769 770 MEAN S.D. N	160.8 161.8 178.4 153.5 167.1 164.3 9.24	160.5 166.8 188.5 165.2 169.1 170.0 10.80 5 Data Unav	197.1 206.7 231.3 196.0 209.7 208.2 14.23	228.9 239.8 261.3 222.3 254.3 241.3 16.48		



IN	DIVID	UAL BO	DY WE	IGHTS (Grad	ms)		
GR DC	QUP:	1-F	ka)	SEX:	FEMALE	+	
ANIMAL #		DAY 0	DAY 7	DAY 14			
657	201.5	210.2	230.2	248.0			
658	193.4	202.2	212.2	235.8			
	200.5	209.3	223.3	250.0			
660	189.2	193.7	226.7	248.4			
MEAN	199.1	207.5	228.9	253.8			
S.D.	8.33	10.45	14.62	19.22			
N	5	5	5	5			
	:	Data Unav	ailable				
	GR DC ANIMAL # 656 657 658 659 660 MEAN S.D.	GROUP: DOSE: ANIMAL # DAY -3 656 210.9 657 201.5 658 193.4 659 200.5 660 189.2 MEAN 199.1 S.D. 8.33 N 5	GROUP: 1-F DOSE: 30 (mg/ ANIMAL # DAY -3 DAY 0 656 210.9 221.9 657 201.5 210.2 658 193.4 202.2 659 200.5 209.3 660 189.2 193.7 MEAN 199.1 207.5 S.D. 8.33 10.45 N 5	GROUP: 1-F DOSE: 30 (mg/kg) ANIMAL # DAY -3 DAY 0 DAY 7 656 210.9 221.9 252.1 657 201.5 210.2 230.2 658 193.4 202.2 212.2 659 200.5 209.3 223.3 660 189.2 193.7 226.7 MEAN 199.1 207.5 228.9 S.D. 8.33 10.45 14.62	GROUP: 1-F SEX: DOSE: 30 (mg/kg) ANIMAL # DAY -3 DAY 0 DAY 7 DAY 14 656 210.9 221.9 252.1 286.6 657 201.5 210.2 230.2 248.0 658 193.4 202.2 212.2 235.8 659 200.5 209.3 223.3 250.0 660 189.2 193.7 226.7 248.4 MEAN 199.1 207.5 228.9 253.8 S.D. 8.33 10.45 14.62 19.22 N 5 5 5 5	ANIMAL # DAY -3 DAY 0 DAY 7 DAY 14 656 210.9 221.9 252.1 286.6 657 201.5 210.2 230.2 248.0 658 193.4 202.2 212.2 235.8 659 200.5 209.3 223.3 250.0 660 189.2 193.7 226.7 248.4 MEAN 199.1 207.5 228.9 253.8 S.D. 8.33 10.45 14.62 19.22 N 5 5 5 5	GROUP: 1-F SEX: FEMALE DOSE: 30 (mg/kg) ANIMAL # DAY -3 DAY 0 DAY 7 DAY 14 656 210.9 221.9 252.1 286.6 657 201.5 210.2 230.2 248.0 658 193.4 202.2 212.2 235.8 659 200.5 209.3 223.3 250.0 660 189.2 193.7 226.7 248.4 MEAN 199.1 207.5 228.9 253.8 S.D. 8.33 10.45 14.62 19.22 N 5 5 5 5



	IN	DIVID	JAL BO	DY WE	IGHTS (Gra	ms)	
STUDY: 104IP26	GR DO ANIMAL#		2-F 50 (mg/	kg) DAY 7	SEX:	FEMALE	
	666 667 668 669 670 MEAN S.D.	203.4 217.4 195.9 185.3 198.7 200.1 11.71	209.5 225.7 204.8 187.2 200.8 205.6 13.98 5 Data Unav	252.3 248.8 226.3 212.9 221.1 232.3 17.39 5 ailable	258.0 278.8 253.8 225.2 241.3 251.4 19.93		



INDIVIDUAL BODY WEIGHTS (Grams)										
STUDY: 104IP26	GR	OUP:	3-F	/lear\	SEX:	FEMALE				
	ANIMAL #	SE: DAY -3	125 (mg	DAY 7	DAY 14					
	676	201.5	211.5	С	С					
	677	215.2	219.4	C	С					
	678	190.9	192.7	C	С					
	679	194.7	196.2	C	С					
	680	201.1	202.3	c	С					
	MEAN	200.7	204.4		**					
	S.D.	9.26	11.00							
	N	5	5	0	0					
	: Data	Unavaila	able c	: Animal	Found Dead					



	INDIVIDUAL BODY WEIGHTS (Grams)										
STUDY:	104IP26	GROUP: DOSE:	4-F	· /le~\	SEX:	FEMALE					
	ANIP	AL # DAY -	250 (mg	DAY 7	DAY 14						
	686	195.3	202.9	C	С						
	687			C	C						
	688			c	C						
	689			C	C						
	690			C	c						
	M	EAN 197.6	205.2								
	S	.D. 11.89									
	N		5	0	0						
	••	: Data Unavai	lable c	: Animal	Found Dead						



INDIVIDUAL BODY WEIGHTS (Grams)										
STUDY: 104IP26	GRO DO:	OUP: 5	-F 00 (mc	g/kg)		FEMALE				
	ANIMAL #	DAY -3	DAY O	DAY 7	DAY 14					

	696	207.9	215.9	C	C					
	697	198.7	205.1	C	C					
	698	194.1	204.5	C	C					
	699	206.6	217.3	C	C					
	700	182.8	184.0	C	C					
	MEAN	198.0	205.4							
	S.D.		13.33		• •					
	N.	10.23	15.55	0	0					
		Unavailab	ر ما	_	Found Dead					
	. vata	DIRAGICAL	ve (- Attitid	Todika bead					



USC. NO. 1 . 1 . 1 . 1 . 1 . 1 . 1 . 1 . 1 . 1						
	INDIVI	DUAL W	EIGHT	GAIN (Gran	ns)	
STUDY: 104P024	GROUP: DOSE:	3-F 20(mg/	kg)		FEMALE	•
	ANIMAL #	DAY 7	DAY 14	TOTAL GAIN		
	504	20.4	404 0	450.0		
	506 507	29.1 22.4	121.8 31.6	150.9 54.0		
	508 509	38.6 14.1	11.3 34.8	49.9 48.9		
	510	27.6	24.8	52.4		
	MEAN	26.4	44.9	71.2		
	S.D. N	9.01 5	43.95 5	44.59 5		
	: Data Unavaila	able b	: Schedule	d Sacrifice		



	INDIVI	DUAL V	VEIGHT (GAIN (Grad	ns)	
STUDY: 104P024	GROUP: DOSE:	6-F 50(mg/	/kg)	SEX:	FEMALE	
	ANIMAL #	DAY 7	DAY 14	GAIN		
	526 527 528 529 530	20.5 9.7 22.7 26.1 29.0	24.5 21.2 26.7 -30.8 35.4	45.0 30.9 49.4 -4.7 64.4		
	MEAN S.D. N	21.6 7.40 5	15.4 26.36 5	37.0 26.19 5		
	-: Data Unavail	able b	: Scheduled	Sacrifice		



	INDIV	IDUAL	WEIGHT	GAIN (Gra	ns)	
STUDY: 104P024 G	ROUP:	7-F 110(m	g/kg)		FEMALE	
	ANIMAL #	# DAY	7 DAY 14	TOTAL GAIN		
	531	8.8		42.7		
	532	-6.1	58.0	51.9		
	533	-41.7	С			
	534	C	C			
	535	19.5	24.8	44.3		
	MEAN	-4.9	38.9	46.3		
	S.D.	26.70	17.16	4.92		
	N	4	3	3		
: Data Unavailabl	e b:	Schedul ed	Sacrifice	c: Animal	Found Dead	

	R	A	5	T
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	INDIV	IDUAL	WEIGHT	GAIN (Gra	ms)	
STUDY: 104P024	GROUP: DOSE:	8-F 250(m	g/kg)		FEMALE	
	ANIMAL #	DAY 7	DAY 14	TOTAL GAIN		
	574		_	· ·		
	536 537	-33.6	42.7	9.1		
	538	С	С			
	539	С	C			
	540	С	С			
	MEAN	-33.6	42.7	9.1		
	S.D.					
	N	1	1	1		
: Data Unavaila	able b:	Schedul ed	Sacrifice	c: Animal	Found Dead	

DRAFT

	INDIVIDU	AL WE	EIGHT	GAIN (Gran	ns)
STUDY: 104P024	GROUP: 9-1 DOSE: 60	F 0 (mg/	'kg)		FEMALE
	ANIMAL #	DAY 7	DAY 14	TOTAL GAIN	
	541	С	С		
	542	C	C		
	543	C	C		
	544	C	C		
	545	C	c		
	MEAN		••		
	S.D.				
	N	0	0	0	
	: Data Unavailable	c:	Animal	Found Dead	



	INDIV	/IDUAL	WEIGHT	GAIN (Gra	ms)		
STUDY: 104I	P24 GROUP: DOSE:	1-F 20(mg	/kg)	SEX:	FEMALE	PAGE:	6
	ANIMAL	# DAY 7	DAY 14	GAIN			
				4	•		
	556	С	C				
	557	C	C				
	558	-9.1	26.1	17.0			
	559		C				
	560	-2.4	45.6	43.2			
	MEAN		35.9	30.1			
	S.D.	4.74	13.79	18.53			
	N	2	2	2			
	: Data Unavailable b:	Schedul ed	Sacrifice	c: Animal	Found Dead		



	INDIVIDUZ	AL WEI	GHT G	AIN (Gram	s)		
STUDY: 104IP24	GROUP: 2-I DOSE: 50	mg/kg	r)	SEX:	FEMALE	PAGE:	7
	ANIMAL # C	DAY 7 D	AY 14	GAIN			
	566	С	C				
	567	C	С				
	568	С	C				
	569	C	C				
	570	C	C				
	MEAN	• •					
	S.D.						
	N	0	0	0			
-	-: Data Unavailable	c: A	nimal Four	nd Dead			



그리고의 이 그림을 하면 하고 있다고 그리고 그리고 하는 것이 되었다. 그리고							
	INDIVIDUA	L WE	EIGHT	GAIN (Gran	ns)		
STUDY: 104IP24	GROUP: 3-F DOSE: 110	mg/	'kg)	SEX:	FEMALE	PAGE:	8
	ANIMAL # D	AY 7	DAY 14	GAIN			
	576	C	С				
	577	C	С				
	578	C	С				
	579	C	C				
	580	C	С				
	MEAN						
	S.D.						
	N	0	0	0			
:	Data Unavailable	c:	Animal i	Found Dead			

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	INDIVIDU	AL WE	EIGHT	GAIN (Gran	ns)		
STUDY: 104IP24	GROUP: 4- DOSE: 25	F 0(mg/	(kg)	SEX:	FEMALE	PAGE:	9
	ANIMAL #	DAY 7	DAY 14	GAIN			· • • • • • • •
	586	C	C				
	587	C	C				
	588	C	C				
	589	C	C				
	590	С	C				
	MEAN	••					
×.	S.D.						
	N	0	0	0			
l:	Data Unavailable	c:	Animal	Found Dead			



	INDIVIDU	JAL W	EIGHT	GAIN (Gran	ns)		
STUDY: 104IP24	GROUP: 5- DOSE: 60	F 00(mg	/kg)	SEX:	FEMALE	PAGE:	10
	ANIMAL #	DAY 7	DAY 14	GAIN			
	596	С	С				
	597	C	C	• •			
	598	C	C				
	599	C	C				
	600	C	C				
	MEAN						
	S.D.						
	N	0	0	0			
:	Data Unavailabl	e c:	Animal	Found Dead			

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	INDIVI	DUAL W	EIGHT	GAIN (Gran	ns)
STUDY: 104IP4A	GROUP: DOSE:	l-F 5(mg/k	g)		FEMALE
	ANIMAL #	DAY 7	DAY 14	TOTAL GAIN	
	471	14.2	10.4	24.6	
	472	4.8	11.8	16.6	
	473	19.0	4.9	23.9	
	474	13.2	12.5	25.7	
	475	17.0	13.2	30.2	
	MEAN	13.6	10.6	24.2	
	S.D.	5.45	3.33	4.91	
	N	5	5	5	
••	: Data Unavaila	ble b	: Schedul	ed Sacrifice	

ACUTE INTRAPERITONEAL TOXICITY STUDY OF

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	INDIV	IDUAL W	EIGHT	GAIN (Gran	rs)
STUDY: 104IP4A	GROUP: DOSE:	2-F 10(mg/	kg)	SEX:	FEMALE
	ANIMAL #	DAY 7	DAY 14	GAIN	
	461	23.6	20.3	43.9	
	462	12.9	18.5	31.4	
	463	20.9	16.8	37.7	
	464	11.1	9.3	20.4	
	465	21.7	7.7	29.4	
	MEAN	18.0	14.5	32.6	
	S.D.	5.64	5.66	8.86	
	N	5	5	5	
·	Data Ilnavail	able by	Schodule	d Sacrifica	

					STREET, HOLD DESCRIPTION	
	INDIVI	DUAL V	WEIGHT	GAIN (Gran	ns)	
STUDY: 104IP4A	GROUP: DOSE:	3-F 16.5(r	mg/kg)	SEX:	FEMALE	
	ANIMAL #	DAY 7	DAY 14	GAIN		
	451	21.4	8.9	30.3		
	452	5.9	11.2	17.1		
	453	22.1	8.8	30.9		
	454	22.6	15.3	37.9		
	455	26.2	5.4	31.6		
	MEAN	19.6	9.9	29.6		
	S.D.	7.90	3.65	7.60		
	N	5	5	5		
	: Data Unavail	able b	b: Schedule	ed Sacrifice		

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	INDIV	IDUAL	WEIGHT	GAIN (Gra	ms)		
STUDY: 104IP4A	GROUP:	4-F 30(mg	/kg)		FEMALE		
	ANIMAL #	DAY 7	DAY 14	TOTAL GAIN			
	441	С	C				
	442	-51.4	C				
	443	22.4	19.5	41.9			
	444	4.9	17.7	22.6			
	445	С	С				
	MEAN	-8.0	18.6	32.3			
	S.D.	38.56	1.27	13.65			
	N	3	2	2			
: Data Unavailabl	le b:	Schedul ed	Sacrifice	c: Animal	Found Dead		

						<u> </u>
	INDIV	IDUAL V	VEIGHT	GAIN (Gran	ms)	
STUDY: 104P026	GROUP: DOSE:	1-F 550 (mg	g/kg)		FEMALE	
	ANIMAL #	DAY 7	DAY 14	TOTAL GAIN		
	606	16.8	22.0	38.8		
	607	10.0	C	50.0		
	608	c	c			
	609	c	c	• •		
	610	С	С			
	MEAN	16.8	22.0	38.8		
	S.D.	••				
	N		!	1		
: Data	Unavailable b:	Scheduled 9	Sacrifice -	c: Animal	Found Dead	



	INDIV	IDUAL	WEIGHT	GAIN (Gra	ms)	
STUDY: 104P026	GROUP: DOSE:	2-F 700(m	ıg/kg)	SEX:	FEMALE	
	ANIMAL #	DAY	7 DAY 14	GAIN		
	616	С	С			
	617	C	C			
	618	6.1	32.0	38.1		
	619	С	C			
	620	С	С			
	MEAN	6.1	32.0	38.1		
	S.D.					
	N	1	1	1		
: Data Unavaila	ble b:	Scheduled	Sacrifice	c: Animal	Found Dead	

						AF	T	
	INDIVIDU	AL WE	IGHT	GAIN (Gram	ns)		~	
STUDY: 104P026	GROUP: 3- DOSE: 90	F 0(mg/	kg)		FEMALE			
			DAY 14	TOTAL GAIN				
	626	С	С					
	627 628	С	C					
	629	C	C					
	630	C	С					
	MEAN							
	S.D. N	0	0	0				
:	Data Unavailable	c: /	Animal F	ound Dead				



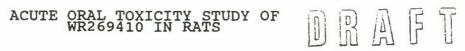
INDIVIDUAL WEIGHT GAIN (Grams)										
STUDY: 104P026	GROUP:	4-F 1150(mg/kg)		FEMALE					
	ANIMAL #	DAY 7	7 DAY 14	TOTAL GAIN						
	636	C	C							
	637	3.7	53.2	56.9						
	638	С	C							
	638 639	0.5	32.8	33.3						
	640	C	С	• •						
	MEAN	2.1	43.0	45.1						
	S.D.	2.26	14.42	16.69						
	N	2	2	2						
: Data Unavailab	le b:	Schedul ed	Sacrifice	c: Animal	Found Dead					

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	INDIVIDUA	L W	EIGHT	GAIN (Gran	ns)	
STUDY: 104P026	GROUP: 5-F DOSE: 150	0 (m	g/kg)	SEX:	FEMALE	
	ANIMAL # D	AY 7	DAY 14	GAIN		
	646	C	C			
	647	C	С			
	648	С	С			
	649	С	C	• •		
	650	С	С			
	MEAN					
	S.D.			• •		
	N	0	0	0		
	: Data Unavailable	c:	Animal	Found Dead		

	0		E	T
10)	JU	151	1	1.1

		INDI	VIDUAL	WEIGHT	GAIN (Gra	ms)	
STUDY: 104P	06A	GROUP DOSE:	1-F 150(n	ng/kg)	SEX:	FEMALE	
		ANIMAL	# DAY	7 DAY 14			
		436	11.5	23.6	35.1		
		437	22.5	12.4	34.9		
		438	С	С	••		
		439	30.3	30.3	60.6		
		440	C	С	••		
		MEAN	21.4	22.1	43.5		
		S.D.			14.78		
		N.		3.04	3		
	: Data	· ·	Scheduled	Sacrifice	c: Animal	Found Dead	



	INDIVIDUA	L WI	EIGHT	GAIN (Gram	s)
STUDY: 104P06A GI	ROUP: 2-F	mg,	/kg)		FEMALE
	ANIMAL # D	AY 7	DAY 14	TOTAL GAIN	
	426	С	С	••	
	427	С	C		
	428	C	C	• •	
	429	С	C		
	430	C	С		
	MEAN				
	S.D.				
	N	0	0	0	
: Dat	a Unavailable	c:	Animal	Found Dead	



	INDIVIDUA	AL WEIGHT	GAIN (Gram	s)
STUDY: 104PO6A	GROUP: 3-F DOSE: 350	(mg/kg)	SEX:	FEMALE
	ANIMAL # D	AY 7 DAY 14	GAIN	
			147	
	416	с с		
	417	c c		
	418	1.3 29.8	31.1	
	419	c c		
	420	c c		
	MEAN	1.3 29.8	31.1	
	S.D.			
	N	1 1	1	
: Data	Unavailable b: Schedu	led Sacrifice	c: Animal	Found Dead



	INDIVII	DUAL WI	EIGHT G	AIN (Gran	s)
STUDY: 104P06B	GROUP: 1 DOSE: 4	L-F 10(mg/)	(g)		FEMALE
	ANIMAL #	DAY 7	DAY 14	TOTAL GAIN	
•	·		7. /		
	756 757	27.7 37.4	32.6 28.0	60.3 65.4	
	758 759	37.4 29.0	30.4 30.3	67.8 59.3	
	760	44.3	32.3	76.6	
	MEAN	35.2	30.7	65.9	
	S.D. N	6.84 5	1.85 5	6.95 5	
	: Data Unavaital	bte b:	Scheduled	Sacrifice	

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INDIVIDUAL WEIGHT GAIN (Grams)							
STUDY: 104P06B	GROUP: DOSE:	2-F 80(mg	/ka)	SEX:	FEMALE		
	ANIMAL #	DAY 7		TOTAL GAIN			
•••••••••							
	766	36.6	31.8	68.4			
	767	39.9	33.1	73.0			
	768	42.8	30.0	72.8			
	769	30.8	26.3	57.1			
	770	40.6	44.6	85.2			
	MEAN	38.1	33.2	71.3			
	S.D.	4.67	6.89	10.10			
	N	5	5	5			
:	Data Unavaila	able	b: Schedule	ed Sacrifice			



	INDIVI	DUAL	WEIGHT	GAIN (Gran	ns)	
STUDY: 104IP26	GROUP: DOSE:	1-F 30(mg	/kg)	SEX:	FEMALE	
	ANIMAL #	DAY 7	DAY 14	GAIN		
	656 657	30.2	34.5 17.8	64.7 37.8		
	658	10.0	23.6	33.6		
	659 660	14.0 33.0	26.7	40.7 54.7		
	MEAN	21.4	24.9	46.3		
	S.D.	9.98	6.28	12.98		
	N	5	5	5		
	: Data Unavail	able	b: Schedule	d Sacrifice		



	INDIVI	DUAL W	VEIGHT	GAIN (Gran	ms)	
STUDY: 104IP26	GROUP: DOSE:	2-F 60(mg/	/kg)	SEX:	FEMALE	•
	ANIMAL #	DAY 7	DAY 14	GAIN		
	666 667	42.8 23.1	5.7 30.0	48.5 53.1		
	668 669	21.5 25.7	27.5 12.3	49.0 38.0		
	670	20.3	20.2	40.5		
	MEAN	26.7	19.1	45.8		
	S.D. N	9.24 5	10.20	6.32 5		
	-: Data Unavail	able b	: Schedule	d Sacrifice		

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	INDIVIDUAL	WEIGHT	GAIN (Gram	s)
STUDY: 104IP26	GROUP: 3-F DOSE: 125((mg/kg)	SEX:	FEMALE
	DODH: 125 (mg/11g/	TOTAL	
	ANIMAL # DAY	7 7 DAY 14	GAIN	
	676	с с		
	677	c c		
	678 679	c c		
	679	c c		
	680	СС	• •	
	MEAN -			
	0.0.			
		0 0	0	
	: Data Unavailable	c: Animal	Found Dead	

	10			
	107	101	15	75
13	JL		1	1 1

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	INDIVIDUZ	AL W	EIGHT	GAIN (Gran	ns)	
STUDY: 104IP26	GROUP: 4-1 DOSE: 250	mg	/kg)	SEX:	FEMALE	
	ANIMAL# [DAY 7	DAY 14	GAIN		
	686	С	c			
	687	C	C			
	688	C	С			
	689	C	C			
	690	C	С			
	MEAN		••			
	S.D.			• •		
	N	0	0	0		
:	Data Unavailable	C	: Animal	Found Dead		

ACUTE INTRAPERITONEAL STUDY OF WR269410 IN RATS



	INDIVIDU	AL WEIGHT	GAIN (Grams)	
STUDY: 104IP26	GROUP: 5- DOSE: 50	F 0(mg/kg)	SEX: F	FEMALE
	ANIMAL #	DAY 7 DAY 14	GAIN	
	696	с с		
	697	c c		
	698	c c		
	699	C C		
	700	СС		
	MEAN			
	S.D.			
	N	0 0	0	
	: Data Unavailable	e c: Animal	Found Dead	

APPENDIX 5

Individual Necropsy Observations

Individual Necropsy Observations

WR242511 Tartrate (Gavage)

(10 mg base/kg)

493 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

495 M

SPLEEN - ENLARGED LIVER - ENLARGED (ENTIRE)

(15 mg base/kg)

496 M

LIVER - ALL LOBES ENLARGED BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

497 M

LIVER - ALL LOBES ENLARGED

498 M

LIVER - ALL LOBES ENLARGED WITH MOTTLED YELLOW PIGMENTATION BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

499 M

SPLEEN - ENLARGED LIVER - ALL LOBES ENLARGED BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

500 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY LIVER - ALL LOBES ENLARGED

(16.5 mg base/kg)

489 M

KIDNEYS - MULTIPLE IRREGULAR BILATERAL MOTTLED LESIONS

Individual Necropsy Observations

WR242511 Tartrate (Gavage) contd.

(20 mg base/kg)

501 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
LIVER - ALL LOBES ENLARGED WITH MOTTLED YELLOW PIGMENTATION

502 M

HEART - ALL CHAMBERS ENLARGED LIVER - ALL LOBES ENLARGED AND MOTTLED BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

503 M

LIVER - ALL LOBES ENLARGED WITH MOTTLED PIGMENTATION

504 M

LIVER - ALL LOBES ENLARGED WITH MOTTLED PIGMENTATION

505 M

LIVER - ALL LOBES ENLARGED WITH MOTTLED COLOR

507 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

508 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

509 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

(25 mg base/kg)

511 M

LIVER - ALL LOBES ENLARGED WITH MOTTLED YELLOW PIGMENTATION

513 M

LIVER - ALL LOBES ENLARGED WITH MOTTLED YELLOW PIGMENTATION

514 M

LIVER - ENLARGED WITH YELLOW AND RED MOTTLED PIGMENTATION

Individual Necropsy Observations

WR242511 Tartrate (Gavage) contd.

(35 mg base/kg)

516 M

LIVER - ALL LOBES ENLARGED WITH MOTTLED YELLOW PIGMENTATION KIDNEY - THICK AND ENLARGED (BOTH)

517 M

LIVER - ENLARGED WITH MOTTLED YELLOW PIGMENTATION

518 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
LIVER - ALL LOBES ENLARGED WITH MOTTLED YELLOW PIGMENTATION

520 M

LIVER - ALL LOBES ENLARGED WITH MOTTLED YELLOW PIGMENTATION

(50 mg base/kg)

522 M

LIVER - ALL LOBES ENLARGED WITH MOTTLED YELLOW PIGMENTATION KIDNEYS - BOTH ARE ENLARGED THICK AND RAISED BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

523 M

LIVER - ALL LOBES ENLARGED WITH MOTTLED PIGMENTATION BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

525 M

LIVER - ALL LOBES ENLARGED AND MOTTLED

(110 mg base/kg)

531 F

SPLEEN - ENLARGED

532 F

SPLEEN - ENLARGED

Individual Necropsy Observations

WR242511 Tartrate (Gavage) contd.

(250 mg base/kg)

536 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

537 F

KIDNEY - MORE THAN 5 YELLOW-WHITE FOCI (LEFT)

SPLEEN - ENLARGED ORGAN

LIVER - ALL LOBES ENLARGED WITH MOTTLED YELLOW PIGMENTATION

538 F

LIVER - ALL LOBES ENLARGED WITH MOTTLED PIGMENTATION

540 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

(600 mg base/kg)

541 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

542 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

543 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

Individual Necropsy Observations

WR242511 Tartrate (Intraperitoneal)

(5 mg base/kg)

476 F

KIDNEYS - MULTIPLE IRREGULAR MOTTLED BILATERAL LESIONS

478 F

KIDNEYS - MULTIPLE IRREGULAR MOTTLED BILATERAL LESIONS

(10 mg base/kg)

463 M

LIVER - ONE IRREGULAR WHITE SCAR ON RIGHT LATERAL LOBE (≈18x6 MM)

470 F

HEART - RED GELATINOUS FLUID IN PERICARDIAL SAC

(16.5 mg base/kg)

451 M

LIVER - IRREGULAR WHITE SCAR ON RIGHT LATERAL LOBE (≈9x6 MM)

453 F

LIVER - IRREGULAR WHITE ADHESION ON MEDIAN (≈10x3 MM IN SIZE)

456 F

LIVER - IRREGULAR WHITE SCAR ON RIGHT LATERAL LOBE (≈18x6 MM)

458 F

STOMACH - DILATED

(20 mg base/kg)

551 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
LIVER - ENLARGED MOTTLED YELLOW PIGMENTATION ON ALL LOBES

552 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY LIVER - YELLOW PIGMENTATION ON ALL LOBES ABDOMEN - PALE RED WATERY FLUID IN ABDOMINAL CAVITY (≈2 cc)



Individual Necropsy Observations

WR242511 Tartrate (Intraperitoneal) contd.

(20 mg base/kg) contd.

554 F

HEART - ALL CHAMBERS ARE ENLARGED

COLON - ENTIRE LENGTH IS DILATED

CECUM - ENTIRE LENGTH IS DILATED

555 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
ABDOMEN - PALE RED WATERY FLUID IN ABDOMINAL CAVITY (≈2 cc)

556 M

ADRENALS - BOTH ARE ENLARGED
BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

558 M

CECUM - ENTIRE LENGTH IS DILATED
COLON - ENTIRE LENGTH IS DILATED
BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

559 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
ABDOMEN - PALE RED WATERY FLUID IN ABDOMINAL CAVITY (≈2 cc)

560 M

CECUM - ENTIRE LENGTH IS DILATED COLON - ENTIRE LENGTH IS DILATED ABDOMEN - CLEAR WATERY FLUID IN ABDOMINAL CAVITY (≈1-2 ∞)

(30 mg base/kg)

443 F

LIVER - TWO IRREGULAR ADHESION ON LEFT AND MEDIAN LOBES (10X4 MM)

(50 mg base/kg)

561 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY LIVER - IRREGULAR YELLOW PIGMENTATION ON ALL LOBES ABDOMEN - PALE RED WATERY FLUID IN ABDOMINAL CAVITY (≈2 cc)

562 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY LIVER - IRREGULAR YELLOW PIGMENTATION ON ALL LOBES ABDOMEN - PALE RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)



Individual Necropsy Observations

WR242511 Tartrate (Intraperitoneal) contd.

(50 mg base/kg) contd.

563 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

564 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
LIVER - IRREGULAR YELLOW PIGMENTATION ON ALL LOBES
ABDOMEN - PALE RED WATERY FLUID IN ABDOMINAL CAVITY (≈2 cc)

565 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

566 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
ABDOMEN - PALE YELLOW WATERY FLUID IN ABDOMINAL CAVITY (≈2 cc)

567 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

569 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

(110 mg base/kg)

571 F

ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc) LIVER - IRREGULAR YELLOW PIGMENTATION ON ALL LOBES

572 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

573 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

574 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY LIVER - YELLOW IRREGULAR PIGMENTATION ON ALL LOBES ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

ACUTE ORAL AND INTRAPERITONEAL TOXICITY STUDY OF WR242511 AND WR269410 IN RATS

Individual Necropsy Observations

WR242511 Tartrate (Intraperitoneal) contd.

(110 mg base/kg) contd.

576 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

579 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

578 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

579 M

ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

(250 mg base/kg)

581 F

SKIN - CIRCULAR HOLE ON ABDOMEN (≈3 CM) LIVER - ENLARGED METTLE YELLOW PIGMENTATION ON ALL LOBES SPLEEN - ENLARGED BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

582 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY LIVER - IRREGULAR YELLOW PIGMENTATION ON ALL LOBES ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

583 F

ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

LIVER - IRREGULAR YELLOW PIGMENTATION ON ALL LOBES

585 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY LIVER - IRREGULAR YELLOW PIGMENTATION ON ALL LOBES ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

586 M

ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

587 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc) 5 - 9



Individual Necropsy Observations

WR242511 Tartrate (Intraperitoneal) contd.

(250 mg base/kg) contd.

588 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

589 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

590 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
LIVER - IRREGULAR YELLOW PIGMENTATION ON ALL LOBES
ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

(600 mg base/kg)

591 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

592 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

593 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
LIVER - IRREGULAR YELLOW PIGMENTATION ON ALL LOBES
ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

594 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

595 F

BRAIN - RED FLUID IN CRANIAL CAVITY
ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY

596 M

ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY

597 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)



Individual Necropsy Observations

WR242511 Tartrate (Intraperitoneal) contd.

(600 mg base/kg) contd.

598 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

600 M

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY
LIVER - IRREGULAR YELLOW PIGMENTATION ON ALL LOBES
ABDOMEN - RED WATERY FLUID IN ABDOMINAL CAVITY (≈3 cc)

ACUTE ORAL AND INTRAPERITONEAL TOXICITY STUDY OF WR242511 AND WR269410 IN RATS

Individual Necropsy Observations

WR269410 (Gavage)

(550 mg/kg)

601 M

KIDNEYS - MULTIPLE BILATERAL IRREGULAR DARK LESIONS SPLEEN - PUNCTATE ROUND WHITE LESION ON THE CAPSULE

608 F

LUNGS - SEVERAL IRREGULAR BLACK SPOTS ON THE ENTIRE LUNGS (1-2 mm)

(700 mg/kg)

615 M

KIDNEYS - MULTIPLE BILATERAL IRREGULAR DARK LESIONS

(900 mg/kg)

622 M

LIVER - ENLARGED WITH YELLOW MOTTLED PIGMENTATION (ALL LOBES) BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY

(1150 mg/kg)

631 M

KIDNEYS - MULTIPLE BILATERAL IRREGULAR DARK LESIONS

(1500 mg/kg)

645 M

LIVER - MOTTLED YELLOW PIGMENTATION ON ALL LOBES

649 F

LUNGS - SEVERAL IRREGULAR BLACK SPOTS ON ENTIRE AREA (1-2 mm)

650 F

LIVER - MOTTLED PIGMENTATION ON ALL LOBES ADRENALS - BOTH ADRENALS ENLARGED BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY

Individual Necropsy Observations

WR269410 (Intraperitoneal)

(30 mg/kg)

651 M

KIDNEY - IRREGULAR THIN WHITE LINE ON LEFT CAPSULE (≈1 CM) LIVER - WHITE SCAR TISSUE ON LEFT LATERAL LOBE SPLEEN - WHITE SCAR TISSUE ON CAPSULE

652 M

KIDNEYS - IRREGULAR RED PIGMENTATION (3-4 PLACES, ≈1 CM)

653 M

LIVER - ADHESION AND SCAR TISSUE ON ALL LOBES OF THE LIVER

654 M

SPLEEN - WHITE SCAR TISSUE ON CAPSULE

655 M

LIVER - IRREGULAR DEFORMITY ON LEFT LATERAL LOBE SPLEEN - WHITE SCAR TISSUE ON CAPSULE KIDNEYS - NUMEROUS SPOTS OF RED PIGMENTATION (≈1 CM)

657 F

LIVER - LEFT LATERAL LOBE DEFORMED (IRREGULAR AND THICK) SPLEEN - WHITE SCAR TISSUE ON CAPSULE

658 F

SPLEEN - ENLARGED AND SCARRED

659 F

SPLEEN - WHITE SCAR TISSUE ON CAPSULE (≈1 CM) LIVER - THICK ROUNDED ADHESION ON ALL LOBES

660 F

KIDNEY - WHITE SCAR TISSUE (LEFT)

SPLEEN - CAPSULE ENLARGED AND ADHERED TO STOMACH WITH SCAR TISSUE LIVER - ALL LOBES HAVE ADHESIONS AND LEFT LATERAL AND MEDIAN LOBES ARE ENLARGED AND THICK

(60 mg/kg)

661 M

LIVER - LEFT LATERAL LOBE IS THICK AND IRREGULAR IN SHAPE SPLEEN - WHITE SCAR TISSUE ON CAPSULE

Individual Necropsy Observations

WR269410 (Intraperitoneal) contd.

(60 mg/kg) contd.

662 M

KIDNEYS - NUMEROUS SPOTS OF IRREGULAR RED PIGMENTATION (≈1/2 CM) HEART - ENLARGED BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY

663 M

LIVER - LARGE, THICK AND ROUNDED LEFT LATERAL LOBE SPLEEN - WHITE SCAR TISSUE ON CAPSULE HEART - ENLARGED

664 M

LIVER - ADHESION ON ALL LOBES AND LEFT LATERAL LOBE IS DEFORMED (ROUND) AND ALSO HAS SCAR TISSUE
SPLEEN - SCAR TISSUE ON CAPSULE

665 M

SPLEEN - WHITE SCAR TISSUE ON CAPSULE LIVER - DEFORMED AND HAS WHITE ADHESION ON ALL LOBES

666 F

KIDNEYS - IRREGULAR RED PIGMENTATIONS ON RIGHT KIDNEY (≈1 CM)
LIVER - MEDIAL LEFT LATERAL LOBE IS DEFORMED (IRREGULAR AND THICK) AND
HAS ADHESION
SPLEEN - WHITE SCAR TISSUE ON CAPSULE

667 F

HEART - ENLARGED SPLEEN - WHITE SCAR TISSUE ON CAPSULE

668 F

SPLEEN - CAPSULE IS ENLARGED AND HAS SCAR TISSUE BRAIN - GELATINOUS FLUID IN CRANIAL CAVITY

669 F

LIVER - LEFT ANTERIOR AND LEFT LATERAL LOBES ARE DEFORMED (IRREGULAR AND THICK)
SPLEEN - WHITE SCAR TISSUE ON CAPSULE

670 F

SPLEEN - ENLARGED

ACUTE ORAL AND INTRAPERITONEAL TOXICITY STUDY OF WR242511 AND WR269410 IN RATS

Individual Necropsy Observations

WR269410 (Intraperitoneal) contd.

(125 mg/kg)

671 M

LUNGS - TAN IN COLOR

672 M

BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY TESTES - RIGHT TESTICLE IS DARK RED

675 M

BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY LUNGS - ALL LOBES ARE TAN IN COLOR

677 F

LUNGS - ALL LOBES ARE TAN TO DARK BROWN IN COLOR

678 F

BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY LUNGS - ALL LOBES ARE TAN TO DARK BROWN IN COLOR

679 F

BRAIN - RED GELATINOUS FLUID IN CRANIAL CAVITY

680 F

BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY LUNGS - ALL LOBES ARE TAN IN COLOR

(250 mg/kg)

681 M

BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY.

682 M

SPLEEN - ENLARGED

683 M

SPLEEN - ENLARGED

684 M

BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY



Individual Necropsy Observations

WR269410 (Intraperitoneal) contd. 686 F

(250 mg/kg) contd.

685 M

BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY LUNGS - ALL LOBES TAN TO DARK BROWN IN COLOR

687 F

BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY LUNGS - ALL LOBES ARE TAN TO DARK BROWN IN COLOR ABDOMEN - CLOUDY WATER-LIKE FLUID IN THE ABDOMINAL CAVITY (≈2.5 ml)

688 F

BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY

689 F

ABDOMEN - CLEAR WATER-LIKE FLUID IN THE ABDOMINAL CAVITY (≈0.5 ml) BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY

690 F

BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY

(500 mg/kg)

692 M

LUNGS - ALL LOBES TAN TO DARK BROWN IN COLOR ABDOMEN - CLOUDY WATER-LIKE FLUID IN THE ABDOMINAL CAVITY (≈1-2 ml)

693 M

BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY

694 M

ABDOMEN - CLOUDY WATER-LIKE FLUID IN THE ABDOMINAL CAVITY (≈2.5 ml) LUNGS - ALL LOBES ARE TAN TO DARK BROWN IN COLOR BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY

695 M

BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY

696 F

ABDOMEN - CLOUDY WATER-LIKE FLUID IN THE ABDOMINAL CAVITY (≈1.5 ml) LUNGS - ALL LOBES ARE TAN TO DARK BROWN IN COLOR BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY

698 F

ABDOMEN - CLOUDY WATER-LIKE FLUID IN THE ABDOMINAL CAVITY (≈2 ml) LUNGS - ALL LOBES ARE TAN TO DARK BROWN IN COLOR



Individual Necropsy Observations

WR269410 (Intraperitoneal) contd.

(500 mg/kg) contd.

699 F

BRAIN - RED GELATINOUS FLUID IN THE CRANIAL CAVITY

700 F

ABDOMEN - REDDISH-WHITE CLOUDY LIQUID IN ABDOMINAL CAVITY (≈2 ml) BRAIN- RED GELATINOUS FLUID IN THE CRANIAL CAVITY

APPENDIX 6

LD50 Data

LD50 Data

WR242511 Tartrate (Gavage - Males)



<46> Litchfield & Wilcoxon I: Confidence Limits of ED50 Pharmacologic Calculation System - Version 4.2(C) - 09-03-1993

File name Variable		# Responding	# in Group
# 1	: 10	0	5
# 2	: 15	0	5
# 3	: 16.5	3	5
# 4	: . 18	4	5
# 5	: 20	5	5
# 6	: 25	5	. 5
# 7	: 35	5	5
# 8	50	5	5

Observed probit : 5.252934 5.841457

(1) Probit = 15.56985 * Log(Dose) -13.70303

Probit from line: 1.866821 4.608538 5.253016 5.841377 6.553815 8.06269

10.33788 12.74968

Expected effect: 1 34.7832 60.00098 80.00293 93.97559 99 99

Obs./Corrected %: .3 9.2 60 80 98 99.7 99.7 99.7

(2) Probit = 8.268903 * Log(Dose) -5.032327

Corrected probit: 2.251845 3.671254 5.252934 5.841457 7.054189 7.748153

7.748153 7.748153

Corrected probit: 3.236576 4.692657 5.03493 5.347399 5.725764 6.527103

7.735422 9.016291

Expected effect : 3.89502 37.94141 51.43555 63.58984 76.60547 93.66455

99 99

Chi-square: 3.452606E-02 .3508331 2.936415E-02 .1163095 .2554062 6.138554E-02 4.949452E-03 4.949452E-03

Slope Function = 1.319076

Dose	Log (Dose)	* Response	(2) Probit
10	1	.3	2.251845
15	1.176091	9.2	3.671254
16.5	1.217484	60	5.252934
18	1.255273	80	5.841457
20	1.30103	98	7.054189
25	1.39794	99.7	7.748153
35	1.544068	99.7	7.748153
50	1.69897	99.7	7.748153

Total number of animals used = 40 Animals between ED16 & ED84 = 20

Chi-Square for 6 d.f. = 12.592 Chi-Square, calculated = 4.288617

WR24PCM	Value	95% Limits:	Lower C.L.	Upper C.L.
ED50	16.34029		13.76467	19.39786
			•	
Log(ED50)	1.21326		1.138766	1.287754

LD50 Data

WR242511 Tartrate (Gavage - Females)



<46> Litchfield & Wilcoxon I: Confidence Limits of ED50 Pharmacologic Calculation System - Version 4.2(C) - 09-03-1993

File name: Variable:	WR24POF Dose	# Responding	# in Group
# 1:	20	0	5
# 2: # 3:	50 110	0	5
# 4:	250	4	5
# 5:	600	5	5

Observed probit : 4.747066 5.841457

(1) Probit = 3.069424 * Log(Dose) -1.518836

Probit from line: 2.474577 3.696023 4.747065 5.841459 7.008489

Expected effect : 1 9.613281 39.99902 80.00293 97.76782

Obs./Corrected % : .3 3.2 40 80 99.3

(2) Probit = 3.581964 * Log(Dose) -2.630639

Corrected probit: 2.251845 3.147406 4.747066 5.841457 7.457689

Corrected probit: 2.029603 3.45501 4.681556 5.958695 7.320598

Expected effect : 1 6.120117 37.46289 83.11328 98.98206

Chi-square: 4.949495E-03 1.484117E-02 2.74751E-03 6.905911E-03 1.003298E-03

Slope Function Dose	= 1.895139 Log(Dose)	ł Response	(2) Probit
20	1.30103	.3	2.251845
50	1.69897	3.2	3.147406
110	2.041393	40	4.747066
250	2.39794	80	5.841457
600,0001	2.778151	99.3	7.457689

Total number of animals used = 25 Animals between ED16 & ED84 = 10

Chi-Square for 3 d.f. = 7.815 Chi-Square, calculated = .152237

WR24POF	Value	95% Limits:	Lower C.L.	Upper C.L.
ED50	134.9879		77.10719	236.3168
Log(ED50)	2.130295		1.887095	2.373495

LD50 Data

WR242511 Tartrate (Intraperitoneal - Males)

<46> Litchfield & Wilcoxon I: Confidence Limits of ED50 Pharmacologic Calculation System - Version 4.2(C) - 09-10-1993

File name: Variable:	104IP24M Dose	# Responding	# in Group
		0	
# 1:	Þ	U	5
# 2:	10	0	5
# 3:	16.5	1	5
# 4:	20	4	5
# 5:	30	3	5
# 6:	50	5	5
# 7:	110	5	5
# 8:	250	5	5
# 9:	600	5	5

Observed probit : 4.158543 5.841457 5.252934

(1) Probit = 3.046653 * Log(Dose) + 1.026539

Probit from line: 3.156058 4.073192 4.73579 4.990326 5.526815 6.202711 7.245955 8.332231 9.490602

Expected effect : 3.260986 17.7002 39.56836 49.61719 70.09766 88.54443

98.76074 99 99

Obs./Corrected % : 1 5.5 20 80 60 96.5 99.7 99.7 99.7

(2) Probit = 2.678338 * Log(Dose) + 1.361227

Corrected probit: 2.673215 3.401466 4.158543 5.841457 5.252934 6.812316

7.748153 7.748153 7.748153

Corrected probit: 3.233305 4.039565 4.62206 4.845825 5.317456 5.911642 6.828766 7.78372 8.802054

Expected effect : 3.871094 16.83887 35.26172 43.875 62.44141 81.91699

96.63135 99 99

Chi-square: .0221517 9.181341E-02 .1020334 .529959 2.541547E-03 .1435653

2.892813E-02 4.949452E-03 4.949452E-03

Slope Function Dose	= 2.351324 Log(Dose)	* Response	(2) Probit
5	.69897	1	2.673215
10	1	5.5	3.401466
16.5	1.217484	20	4.158543
20	1.30103	80	5.841457
30	1.477121	60	5.252934
50	1.69897	96.5	6.812316
110	2.041393	99.7	7.748153
250	2.39794	99.7	7.748153
600 0001	2.778151	99.7	7.748153

Total number of animals used = 45 Animals between ED16 & ED84 = 25

Chi-Square for 7 d.f. = 14.067Chi-Square, calculated = 4.654457

Upper C.L.	Lower C.L.	Limits:	95%	Value	104IP24M
36.66916	14.21958			22.83462	ED50
1.564301	1.152887			1.358594	Log(ED50)

LD50 Data

WR242511 Tartrate (Intraperitoneal - Females)



<46> Litchfield & Wilcoxon I: Confidence Limits of ED50 Pharmacologic Calculation System - Version 4.2(C) - 09-03-1993

File name: Variable:	WR24IPF Dose	# Responding	# in Group
# 1:	5	0	5
# 2:	10	0	5
# 3:	16.5	0	5
# 4:	20	3	5
# 5:	30	3	5
# 6:	50	5	5
# 7:	110	5	5
# 8:	250	5	5
# 9:	600	5	5

Observed probit : 5.252934 5.252934

(1) Probit = -1.895652E-06 * Log(Dose) + 5.252936

Probit from line: 5.252935 5.252934 5.252934 5.252934 5.252933

5.252933 5.252932 5.252931

Expected effect : 60.00098 60.00098 60.00098 60.00098 60.00098

60.00098 60.00098 60.00098

Obs./Corrected %: 10.5 10.5 10.5 60 60 90.1 90.1 90.1 90.1

(2) Probit = 1.494383 * Log(Dose) + 2.784443

Corrected probit: 3.746275 3.746275 3.746275 5.252934 5.252934 6.287451

6.287451 6.287451 6.287451

Corrected probit: 3.828972 4.278826 4.60383 4.72868 4.991827 5.323355 5.835065 6.367883 6.936064

Expected effect : 12.07764 23.53809 34.5918 39.28125 49.71289 62.72852

79.81152 91.43945 97.34912

Chi-square: 2.343866E-03 9.445205E-02 .256527 .1799778 4.233124E-02 .3204461 6.569508E-02 2.292033E-03 .2036334

Slope Function Dose	# 4.629054 Log(Dose)	* Response	(2) Probit
5	.69897	10.5	3.746275 3.746275
16.5	1.217484	10.5	3.746275 5.252934
30 50	1.477121 1.69897	60 90.1	5.252934 6.287451
110 250	2.041393 2.39794	90.1 90.1	6.287451 6.287451
600.0001	2.778151	90.1	6.287451

Total number of animals used = 45 Animals between ED16 & ED84 = 30

Chi-Square for 7 d.f. = 14.067Chi-Square, calculated = 5.838492

Factor(ED50) = 2.1705

WR24IPF	Value	95% Limits:	Lower C.L.	Upper C.L.
ED50	30.38015		13.99685	65.94011

Log (ED50)

1.48259

1.14603

1.81915

1.D50 Data

WR269410 (Gavage - Males)



<46> Litchfield & Wilcoxon I: Confidence Limits of ED50 Pharmacologic Calculation System - Version 4.2(C) - 09-10-1993

File name: Variable:	104PO26M Dose	# Responding	# in Group
# 1:	40	0	5
# 2:	80	0	5
# 3:	150	0	5
# 4:	230	2	5
# 5:	350	4	5
# 6:	550	2	5
# 7:	700	2	5
# 8:	900	4	5
# 9:	1150	3	5
# 10:	1500	5	5

Observed probit : 4.747066 5.841457 4.747066 4.747066 5.841457 5.252934

(1) Probit = .4479395 * Log(Dose) + 3.963878

Probit from line: 4.681504 4.816348 4.938635 5.02179 5.103467 5.191395 5.23831 5.2872 5.334886 5.386575

Expected effect : 37.46289 42.72656 47.51172 50.86133 54.11523 57.6084 59.42676 61.29297 63.11133 65.07324

Obs./Corrected %: 9.4 10.2 10.4 40 80 40 40 80 60 90.8

(2) Probit = 1.540565 * Log(Dose) + .9585255

Corrected probit: 3.683282 3.729592 3.740753 4.747066 5.841457 4.747066

4.747066 5.841457 5.252934 6.328746

Corrected probit: 3.426603 3.890359 4.310935 4.596921 4.877828 5.180233

5.341584 5.509728 5.673729 5.851501

Expected effect : 5.785156 13.3457 24.54297 34.30469 45.11914 57.17773 63.39844 69.52344 74.97852 80.29004

Chi-square: 2.397422E-02 8.556654E-03 .1080076 1.439287E-02 .4913519 .1205134 .2359367 5.180127E-02 .119588 6.979994E-02

Slope Function Dose	= 4.421223 Log(Dose)	* Response	(2) Probit
40	1.60206	9.4	3.683282
80	1.90309	10.2	3.729592
150	2.176091	10.4	3.740753
230.0001	2.361728	40	4.747066
350	2.544068	80	5.841457
549.9999	2.740363	40	4.747066
699.9999	2.845098	40	4.747066
899.9999	2.954242	80	5.841457
1150	3.060698	60	5.252934
1500	3.176091	90.8	6.328746

Total number of animals used = 50 Animals between ED16 & ED84 = 40

Chi-Square for 8 d.f. = 15.507Chi-Square, calculated = 6.219613

104P026M	Value	95% Limits:	Lower C.L.	Upper C.L.
ED50	420.1183		219.0987	805.5701

LD50 Data

WR269410 (Gavage - Females)

<46> Litchfield & Wilcoxon I: Confidence Limits of RD50 Pharmacologic Calculation System - Version 4.2(C) - 09-03-1993

File name: Variable:	WR26POF Dose	# Responding	# in Group
# 1:	40	0	5
# 2:	80	2	5
# 3:	150	2	5
# 4:	230	. 5	5
# 5:	350	4	5
# 6:	550	4	5
# 7:	700	4	5
` # 8:	900	5	5
# 9:	1150	3	5
# 10:	1500	5	5

Observed probit : 4.747066 4.747066 5.841457 5.841457 5.841457 5.252934

(1) Probit = .8515759 * Log(Dose) + 3.211396

Probit from line: 4.575672 4.832022 5.064503 5.222587 5.377863 5.545023

5.634213 5.727158 5.817813 5.916079

Expected effect: 33.53906 43.30078 52.58398 58.80469 64.73828 70.71973

73.73438 76.65332 79.33301 82.0127

Obs./Corrected %: 9 40 40 90 80 80 80 93.3 60 94.5

(2) Probit = 1.440257 * Log(Dose) + 1.877953

Corrected probit: 3.659031 4.747066 4.747066 6.281729 5.841457 5.841457

5.841457 6.498811 5.252934 6.598534

Corrected probit: 4.185331 4.618892 5.012084 5.279449 5.542066 5.82478

5.975626 6.132823 6.286146 6.452342

Expected effect: 20.7627 35.16602 50.47852 61.00586 70.62402 79.52441 83.54395 87.13281 90.07568 92.68359

Chi-square: 8.410084E-02 1.024907E-02 4.392374E-02 .3533862 .0423729

1.389061E-04 9.135521E-03 3.392418E-02 1.011866 4.865475E-03

Slope	Function Dose	*	4.903449 Log(Dose)	* Response	(2) Probit
		-			
	40		1.60206	9	3.659031
	80		1.90309	40	4.747066
	150		2.176091	40	4.747066
	230.0001		2.361728	90	6.281729
	350		2.544068	. 80	5.841457
	549.9999		2.740363	80	5.841457
	699.9999		2.845098	80	5.841457
	899.9999		2.954242	93.3	6.498811
	1150		3.060698	60	5.252934
	1500		3.176091	94.5	6.598534

Total number of animals used = 50 Animals between ED16 & ED84 = 35

Chi-Square for 8 d.f. Chi-Square, calculated = 15.507 = 7.969812

Factor(ED50) = 2.105249

WR26POF	Value 147.1298	95%	Limits:	Lower C.L. 69.88713	
Log(ED50)	2.167701			1.844397	2.491004

6-7

LD50 Data

WR269410 (Intraperitoneal - Males)



<46> Litchfield & Wilcoxon I: Confidence Limits of ED50 Pharmacologic Calculation System - Version 4.2(C) - 09-03-1993

File nat Variab		WR26IPM Dose	#	Responding	# in Group
#	1:	30		0	5
**	2:	60		0	5
	3:	125	•	3	5
#	4:	250		3	5
#	5:	500		4	5

Observed probit : 5.252934 5.252934 5.841457

(1) Probit = .9775007 * Log(Dose) + 3.10512

Probit from line: 4.549007 4.843264 5.154851 5.449108 5.743365

Expected effect : 32.58203 43.7793 56.17285 67.32227 77.13184

Obs./Corrected % : 8.8 10.3 60 60 80

(2) Probit = 1.934523 * Log(Dose) + .7030232

Corrected probit: 3.646605 3.735193 5.252934 5.252934 5.841457

Corrected probit: 3.560548 4.142897 4.759543 5.341892 5.924242

Expected effect : 7.507813 19.56641 40.47754 63.39844 82.25195

Chi-square: 2.404544E-03 5.455997E-02 .1581882 4.977146E-03 3.473937E-03

Slope	Function Dose	3.266483 Log(Dose)	*	Response	(2)	Probit
	30	1.477121		8.8	3	.646605
	60	1.778151		10.3	3	.735193
	125	2.09691		60	5	.252934
	250	2.39794		60	5	.252934
	500,0001	2.69897		80	5	.841457

Total number of animals used = 25 Animals between ED16 & ED84 = 20

Chi-Square for 3 d.f. = 7.815 Chi-Square, calculated = 1.118019

WR26IPM	Value	95% Limits:	Lower C.L.	Upper C.L.
ED50	166.4209		79.94498	346.4372
Log (ED50)	2.221208		1.902791	2.539624

APPENDIX 7

Protocol and Amendments

Contract No.: DAMD17-92-2001

Task Order No.: UIC-7B UIC/TRL Study No.: 104

ACUTE ORAL AND INTRAPERITONEAL TOXICITY STUDY OF WR242511 and WR269410 IN RATS

1.0 PURPOSE OF THE STUDY:

The purpose of this study is to assess the toxicity of the test articles in CD® rats following either a single oral or intraperitoneal dose.

2.0 SPONSOR:

2.1 Name:

U.S. Army Medical Research and Development Command

2.2 Address: Fort Detrick

21702-5009 Frederick, MD

2.3 Representative: George Schieferstein, Ph.D.

3.0 TESTING FACILITY:

3.1 Name: Toxicology Research Laboratory (TRL)

3.2 Address: University of Illinois at Chicago (UIC)

Department of Pharmacology

P.O. Box 6998

Chicago, Illinois 60680

Study Director: 3.3 Barry S. Levine, D.Sc., D.A.B.T.

4.0 DATES:

4.1 Study Initiation (see Section 12.0): 12/3/92

4.2 Proposed Initiation of Dosing: To be determined.

4.3 Proposed Necropsy Date: 14 days after dosing (the specific date to be

determined later).

Proposed Study Completion (Final Report): 6 weeks after sacrifice 4.4

(the specific date to be

determined later.

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TEST ARTICLES 5.0

5A.1 Name or Code No:

WR242511 Tartrate

Bottle number will be identified in the raw

data.

5A.2 TRL Chemical No:

0930614

5A.3 Physical Description: Orange powder

5A.4 Stability and Handling of Test Article:

5A.4.1 Storage Conditions to Maintain Stability:

> 5A.4.1.1 Temperature:

-20 to -15°C.

5A.4.1.2 Humidity: Ambient conditions at

-20 to -15°C in a

freezer.

5A.4.1.3 Light: Protect from light.

5A.4.1.4 Special Requirements: None.

Special Handling Procedures: Standard safety 5A.4.2 precautions including gloves, labcoat and eve protection.

<u>Log of Test Article:</u> The amount, date, identity of person(s) removing aliquots and the purpose for which 5A.4.3 each aliquot of the test article was removed from the batch will be documented. At termination of the study, all unused test article will be returned to the Sponsor.

5B.1 Name or Code No:

WR269410 (p-Aminoheptanophenone; PAHP)

Bottle number will be identified in the raw

data.

5B.2 TRL Chemical No:

1620614

5B.3 Physical Description:

White powder

5B.4 Stability and Handling of Test Article:

58.4.1 Storage Conditions to Maintain Stability:

> 5B.4.1.1 Temperature:

-20 to -15°C.

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5B.4.1.2 Humidity:

Ambient conditions at

-20 to -15° in a

freezer.

5B.4.1.3 Light:

Protect from light.

5B.4.1.4 Special Requirements: None

5B.4.2 <u>Special Handling Procedures:</u> Standard precautions including gloves, labcoat and eye protection.

5B.4.3 Log of Test Article: The amount, date, identity of person(s) removing aliquots and the purpose for which each aliquot of the test article was removed from the batch will be documented. At termination of the study, all unused test article will be returned to the Sponsor.

6.0 PERSONNEL:

Study Director
Toxicologist
Analytical Chemist
Clinical Veterinarian
Veterinary Support
Tox. Lab Supervisor
Lead Technician
Chemistry Specialist
Ouality Assurance

Barry S. Levine, D.Sc., D.A.B.T.
E. Marianna Furedi-Machacek, D.V.M.
Ian R. Tebbett, Ph.D.
James Artwohl, D.V.M., M.S., D.A.C.L.A.M.
To be documented in the raw data.
Soudabeh Soura, B.S.
Nancy Dinger, B.S.

Thomas Tolhurst, B.S. Ronald C. Schoenbeck

7.0 TEST SYSTEM:

7.1 Species:

Rat.

7.2 Strain:

CD® (Virus Antibody Free)

7.3 Sex(s) and Number:

100 males and 100 females for LD50 test. Up to 20/sex for the range-finding test.

- 7.4 Age of Animals: The animals will be approximately 7 weeks old on the day of dosing.
- 7.5 Weight of Animals: Approximately 200 250 g (males) and \approx 130 170 g (females) at dosing.
- 7.6 <u>Source of Animals:</u> Charles River Breeding Laboratories. The specific source will be specified in the raw data.

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7.7 <u>Justification for Selection of Test System:</u> The rat is a standard and accepted species for toxicology studies, and it is specified by the Sponsor.

- 7.8 Procedure for Unique Identification of Test System: Upon arrival, each animal will be given a study-unique quarantine/pretest number. During the test animal selection process, each test animal will be assigned a test animal number unique to it within the population making up the study. This number will appear as an ear tag and will also appear on a cage card visible on the front of each cage. The cage card will additionally contain the study number, test article identification, treatment group number, and dose level. Cage cards will be color-coded as a function of treatment group. Raw data records and specimens will also be identified by the unique test animal number.
- 7.9 Housing: The animals will be housed in an AAALAC-accredited facility. Animals will be singly housed in polycarbonate cages with Anderson bed-a-cob bedding (Heinold Co., Kankakee, Illinois) in a temperature (65-78°F) and humidity (40-70%) controlled room with a 14 hour light/10 hour dark cycle. The cage size, 840 cm squared area and 20 cm height, is adequate to house rats at the upper weight range as described in the Guide for the Care and Use of Laboratory Animals, DHEW, (NIH) No. 86.23. All animals will be routinely transferred to clean cages with fresh bedding once weekly.
- 7.10 Quarantine Procedure: Animals for the LD50 test will be quarantined for approximately one week. The range-finding test will initiated before the end of the quarantine period. During quarantine, the animals will be observed daily for signs of illness or death and all unusual observations will be reported to the Study Director, Toxicologist or Clinical Veterinarian. Animals will be examined during quarantine and approved for use by the Clinical Veterinarian prior to being placed on test. Any sickly animal will be either eliminated prior to the test animal selection process or replaced by a healthy animal following this procedure but prior to initiation of treatment under the direction of the Study Director or Toxicologist. Quarantine release will be documented on the Clinical Veterinarian Log by a veterinarian prior to study initiation.
- 7.11 Food: Purina Certified Rodent Chow No. 5002 (Ralston Purina Company, St. Louis, MO) will be provided ad libitum from arrival until termination, except during an approximate 16-20 hour fast prior to dosing.
- 7.12 <u>Water:</u> Tap water from an automatic watering system in which the distribution lines are flushed daily will be provided ad libitum from arrival until termination. The water is untreated with additional chlorine or HCl.

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7.13 There are no known contaminants in the feed or water which are expected to influence the study. A copy of the feed certification will be kept with the study records. The results of the most current comprehensive chemical analyses of Chicago water are documented in files maintained by Quality Assurance.

8.0 EXPERIMENTAL DESIGN:

8.1 LD50 Test:

	Dose Level	Route of	Number of	Number of
Test Article	(mg base/kg)a	<u>Administration</u>	Males	<u>Females</u>
WR269410 WR269410	TBD TBD	Oral Oral	5 5	5
WR269410	TBD	Oral	5	5 5 5 5
WR269410	TBD	Oral	5	5
WR269410	TBD	0ra1	5	5
WR269410	TBD	Intraperitoneal	5	5
WR269410	TBD	Intraperitoneal	5	5 5 5 5
WR269410	TBD	Intraperitoneal	5	5
WR269410	TBD	Intraperitoneal	5 5	5
WR269410	TBD	Intraperitoneal	5	5
WR242511	TBD	Oral	5	5
WR242511	TBD	Oral	5	5
WR242511	TBD	Oral	5 5	5 5 5 5
WR242511	TBD	Oral	5	5
WR242511	TBD	Oral	5	5
WR242511	TBD	Intraperitoneal	5	5
WR242511	TBD	Intraperitoneal	5	5
WR242511	TBD	Intraperitoneal	5	5 5 5 5 5
WR242511	TBD	Intraperitoneal	5	5
WR242511	TBD	Intraperitoneal	5	5

^aTBD = To be determined (WR242511 doses will be expressed as mg base per kg).

The number of animals in each group is necessary for statistical analyses.

Doses will be selected from range-finding study data in which 5 groups of 2 animals/sex/dose will be routinely used (Section 8.6).

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- 8.2 <u>Procedure to Control Bias during the Assignment of Animals to Treatment Groups:</u> The animals will be randomly selected, within sex, using a table of random numbers or a computer-generated randomization program. The specific procedure will be documented in the raw data.
- 8.3 Frequency and Route of Administration of Test Article: Five groups of five animals/sex will receive a single dose of the appropriate test article by intraperitoneal injection or gavage as shown in Section 8.1. Dosing volumes will be constant on the basis of body weight and will be routinely 1 or 5 ml/kg (ip), and 5 or 10 ml/kg (oral). The specific dosing volume (ml/kg) will be constant throughout each phase of the study and will be documented in the raw data. Rats which are dosed by gavage will be fasted overnight (≈ 16 to 20 hours) prior to dosing. Food will be returned approximately 1 2 hours after dosing.
- 8.4 <u>Justification of Route(s):</u> The oral and intraperitoneal routes are convenient and accepted procedures for administering a specific amount of a test article to each animal, and is required by the Sponsor.
- 8.5 <u>Test Article Vehicle:</u> 0.5% Na*Carboxymethylcellulose/0.3% Tween 80.
- Range-Finding Test: Initial oral and intraperitoneal range-finding doses of 25 mg/kg of WR242511 will be administered to separate groups of 2 animals/sex. This dose is approximately the oral LD50 determined in a previous acute toxicity study in rats (UIC/TRL Study No. 062). For WR269410, an initial range-finding dose of 800 mg/kg will be used for each route (2 animals/sex). This is the approximate intramuscular LD50 for this drug in mice as indicated by the Sponsor. No data for rats are available for this compound.

Additional range-finding dose levels, routinely either twice or one-half the previous dose level, will be subsequently administered to groups of 2 animals/sex/appropriate route based on the previous results. Five range-finding doses/sex will be routinely administered for each drug by the appropriate route. The range-finding animals will be observed once daily for at least 5 days, and will be discarded when it is apparent that they will survive.

8.7 Test Article Dosage Form Preparation and Analyses: The stability and homogeneity of the test article/carrier mixtures will be determined prior to study start. Dosage formulations will be prepared by suspending the appropriate quantity of test article in the vehicle using a mortar and pestle. They will be analyzed for test article concentration prior to use, and only samples within 10% of their intended concentration will be used.

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8.8 Type and Frequency of Observations, Tests, Analyses and Measurements:

- 8.8.1 <u>Body Weight:</u> Body weights of all animals will be recorded at test animal selection in Week -1, and on Days O (prior to dosing), 7 and 14.
- 8.8.2 Clinical Signs: All test animals will be observed for clinical signs at least three times after treatment on the day of dosing, and daily thereafter until termination. All pharmacologic and/or toxicologic effects will be recorded on an individual test animal basis. The animals will also be observed daily in the afternoon for moribundity/mortality during the two week holding period.
- 8.8.3 Postmortem Observations: All test animals which die during the 14-day observation period will be grossly necropsied as soon as possible. Those test animals that survive to Day 14 will be sacrificed by carbon dioxide asphyxiation and grossly necropsied on that day. The necropsy procedure will be a thorough and systematic examination and dissection of the animal viscera and carcass. A veterinary pathologist will be routinely available to verify gross lesions. All tissues and organs will be discarded following termination of the gross necropsy procedure.
- 8.8.4 <u>Data Analyses:</u> The incidence of all pharmacologic and/or toxicologic effects will be tabulated for each dose level by sex. For body weights, means and standard deviations will be calculated for each dose level by sex and time point. Probit analysis of dose-mortality data as described by Finney (1977) will be used to calculate the LD50 and its 95% confidence interval for each sex, and the slope of each dose-mortality curve.

9.0 RECORDS TO BE MAINTAINED:

All data generated during the conduct of the study, except those that are generated as direct computer input, will be recorded directly, promptly, and accurately in ink in bound books with prenumbered pages or on worksheets that will be bound during or at the conclusion of the nonclinical laboratory study. All appropriate computer and machine output will be bound during or at the conclusion of the study. All data entries will be dated on the day of entry and signed or initialed by the person entering the data.

Any changes in entries for whatever reason (e.g., to correct an error or transposition) will be made so as not to obscure the original entry, will indicate the reason for such change, and will be dated and signed or

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identified at the time of data input. In computer driven collection systems, the operator responsible for direct data input will be identified at the time of data input. Any changes in computer entries for whatever reason (e.g., to correct an error or transposition) will be made in such a manner so as not to obscure the original entry, if possible, will indicate the reason for such change, and will be dated and the responsible individual will be identified.

All recorded data will be reviewed, signed, and dated by a knowledgeable person, other than the person making the entry, to assure adherence to procedures and to verify observations.

Upon completion of the study and submission of the final report, all raw data, documentation, specimens, test article reserves and other materials necessary to reconstruct the study will be stored in the TRL Archives maintained by Quality Assurance, unless otherwise specified by the Sponsor.

All changes or revisions, and reasons therefore, to this protocol once it is approved will be documented, signed by the Study Director and Sponsor, dated and maintained with the protocol.

10.0 REGULATORY REQUIREMENTS:

This study will be performed in compliance with the UIC/TRL Quality Assurance Program designed to conform with FDA Good Laboratory Practice Regulations and EPA Good Laboratory Practice Standards. The protocol for this study was approved by the UIC Animal care committee.

Will this study be submitted to a regulatory agency? Yes

If so, to which agency(ies)? U.S. Food and Drug Administration

Does the Sponsor request that remaining test articles be returned? Yes

Does the Sponsor request that samples of the test article/carrier

mixture(s) be sent? No

11.0 REFERENCES

Finney, D.J., 1977. Probit Analysis, 3rd Edition. Cambridge University Press, Cambridge, England.

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12.0 PROTOCOL APPROVAL:

DRAFT

STUDY DIRECTOR:

Barry S. Levine, D.Sc., D.A.B.T.

12/3/12 Date

QUALITY ASSURANCE:

Knald Schoenh Ronald Schoenbeck 12/7/92

SPONSOR APPROVAL:

George Schieferstein, Ph.D.

Date

Contracting Officer's Representative (COR)

COMMENTS FROM THE COR:

APPENDIX 8

Study Deviations

Study Deviations*

Specific Deviation

Deviation Type



Effect on Study

Protocol	The probit method of Litchfield and Wilcoxon (1949) was used to calculate LD50s because it is an accepted means to calculate dose-mortality curves.	t
Protocol	WR242511 tartrate is incorrectly described in the protocol as an orange powder. The tartrate salt of WR242511 is a yellow powder.	
Protocol	WR242511 tartrate is incorrectly identified in the protocol by the in-house chemical number of 0930614 (which was previously assigned to the succinate salt). The tartrate salt of WR242511 was assigned the in-house chemical	
Protocol	number of 1720614. The WR269410 (intraperitoneal) dosage formulation for the 30, 60, and 250 mg/kg treatment groups were in excess or deficit of 10% of their target concentrations (Table 2).	actual doses administered.
f Illinois at Chica	viation Reports" are contained in the raw data wago, Department of Pharmacology, Chicago, Illinations did not affect the integrity of the study.	
		Barry S. Levine, D.Sc., D.A.B.T.
	1	 Date